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From: Commanding Officer, U. S. Naval Ammunition Depot, Crane, Indiana  
To: National Aeronautics and Space Administration, Goddard Space  
Flight Center, Electrochemical Power Sources Section (716.2),  
Space Power Technology Branch, Greenbelt, Maryland 20771

Subj: Monthly Progress Report on National Aeronautics and Space  
Administration Space Cell Test Program; submission of

Encl: (1) Monthly Progress Report as of 31 March 1966 (3 copies)

1. The progress report for National Aeronautics and Space Administration  
purchase order W11,252B on the space cell test program is submitted as  
enclosure (1).

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# MONTHLY PROGRESS REPORT THROUGH 31 MARCH 1966

## LIFE CYCLE TESTS

1. Status of Cycling Program: The cycling program has included cells from the following manufacturers: General Electric Company (G.E.), Gould-National Batteries, Inc. (Gould), Sonotone Corporation (Sonotone), Yardney Electric Corporation (Yardney), Gulton Industries, Inc. (Gulton) and Delco-Remy (Delco).

TOTAL NUMBER OF PACKS IN PROGRAM: 167

	Total Number of Packs			Cells Failed*	
	Cycled			Since Last	Total To
	To Date	Cycling	Failed	Report	Date
<b>NICKEL CADMIUM (10-cell packs)</b>					
G.E. 3.0 a.h.	12	5	7	0	50
Gould 3.5 a.h.	12	4	8	0	60
Sonotone 5.0 a.h.	12	6	6	0	46
Gulton 6.0 a.h.	12	2	10	0	66
<b>TOTAL</b>	<b>48</b>	<b>17</b>	<b>31</b>	<b>0</b>	<b>222</b>
<b>NICKEL CADMIUM (5-cell packs)</b>					
Sonotone 3.0 a.h.	6	6	0	0	1
Sonotone 5.0 a.h. STABISTOR	8	6	2	0	12
G.E. 5.0 a.h. NIMBUS	6	6	0	0	0
G.E. 12 a.h.	13	6	7	0	23
G.E. 12 a.h. 3rd Electrode	4	2	2	0	2
Gulton 1.25 a.h.	4	4	0	0	0
Gulton 3.6 a.h. COULOMETER	1	1	0	0	0
Gulton 4.0 a.h.	6	6	0	1	4
Gulton 5.0 a.h. NIMBUS	6	6	0	0	2
Gulton 5.6 a.h.	6	5	1	2	2
Gulton 6.0 a.h.	1	0	1	0	3
Gulton 6.0 HSI	3	2	1	1	4
Gulton 6.0 a.h. 3rd Electrode	6	6	0	1	4
Gulton 12 a.h.	6	4	2	0	9
Gulton 20 a.h.	12	3	9	1	33
Gulton 50 a.h.	2	0	2	0	6
Gould 20 a.h.	12	4	8	1	27
<b>TOTAL</b>	<b>102</b>	<b>67</b>	<b>35</b>	<b>7</b>	<b>132</b>
<b>SILVER CADMIUM (10-cell packs)</b>					
Yardney 12 a.h.	5	3	2	0	16
<b>TOTAL</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>16</b>
<b>SILVER CADMIUM (5-cell packs)</b>					
Yardney 5.0 a.h.	6	3	3	0	6
<b>TOTAL</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>6</b>

\* All failure analysis results are cumulative. Total pack failures are shown on pages 8 through 39; partial pack failures on pages 40 through 53.

Enclosure (1)

	Total Number of Packs			Cells Failed*	
	Cycled			Since Last	Total To
	To Date	Cycling	Failed	Report	Date
SILVER ZINC (10-cell packs)					
Yardney 12 a.h.	1	0	1	0	6
Delco 25 a.h.	1	1	0	0	0
TOTAL	2	1	1	0	6
SILVER ZINC (5-cell packs)					
Delco 25 a.h.	3	0	3	0	10
Delco 40 a.h.	1	0	1	0	2
TOTAL	4	0	4	0	12

\* All failure analysis results are cumulative. Total pack failures are shown on pages 8 through 39; partial pack failures on pages 40 through 53.

## 2. Test Parameters:

### a. General Cycling Program:

#### (1) Ambient Temperature:

(a) 0° C.

(b) 25° C.

(c) 40° C.

#### (2) Voltage limits per pack on charge:

(a)  $1.55 \pm 0.03$  volts per cell at 0° C.

(b)  $1.49 \pm 0.03$  volts per cell at 25° C.

(c)  $1.45 \pm 0.03$  volts per cell at 40° C.

#### (3) Depth of Discharge:

##### (a) 90-minute and 3-hour orbits:

1. 15 percent and 25 percent at 0° C.

2. 25 percent and 40 percent at 25° C.

3. 15 percent and 25 percent at 40° C.

##### (b) 24-hour orbits:

1. 50 percent at 25° C and 40° C.

(4) Orbit Times:

(a) 90 minutes--30-minute discharge and 60-minute charge.

(b) 3 hours--30-minute discharge and 150-minute charge.

(c) 24 hours--1-hour discharge and 23-hour charge..

b. Nimbus Packs:

(1) Ambient Temperature:

(a) 0° C.

(b) 25° C.

(c) 40° C.

(2) Voltage limit per pack on charge:  $1.49 \pm 0.03$  volts per cell at each temperature.

(3) Depth of Discharge:

(a) 15 percent and 25 percent at 0° C.

(b) 25 percent and 40 percent at 25° C.

(c) 15 percent and 25 percent at 40° C.

(4) Orbit Time: 90-minutes--30-minute discharge and 60-minute charge.

c. Silver-Cadmium Packs:

(1) Ambient Temperatures:

(a) 90-minute orbit:

(1) -20° C.

(2) 0° C.

(3) 25° C.

(b) 24-hour orbit:

(1) 0° C.

(2) 25° C.

(3) 40° C.

- (2) Voltage limits per pack on charge:
- (a) 90-minute orbit:
    - (1)  $1.60 \pm 0.03$  volts per cell at  $-20^{\circ}$  C.
    - (2)  $1.58 \pm 0.03$  volts per cell at  $0^{\circ}$  C.
    - (3)  $1.55 \pm 0.03$  volts per cell at  $25^{\circ}$  C.
  - (b) 24-hour orbits:  $1.50 \pm 0.03$  volts per cell at  $0^{\circ}$  C.,  $25^{\circ}$  C., and  $40^{\circ}$  C.
- (3) Depth of Discharge:
- (a) 90-minute orbit: 25 percent at all temperatures.
  - (b) 24-hour orbit:
    - (1) 20 percent and 50 percent at  $0^{\circ}$  C.
    - (2) 20 percent at  $25^{\circ}$  C.
    - (3) 20 percent and 50 percent at  $40^{\circ}$  C.
- (4) Orbit Time:
- (a) 90-minute--30-minute discharge and 60-minute charge.
  - (b) 24-hours--1-hour discharge and 23-hour charge.
- d. Silver-Zinc Packs:
- (1) Ambient Temperature:  $25^{\circ}$  C.
  - (2) Voltage limit per pack on charge:  $1.97 \pm 0.03$  volts per cell at  $25^{\circ}$  C.
  - (3) Depth of Discharge:
    - (a) 3-hour orbit: 40 percent at  $25^{\circ}$  C.
    - (b) 24-hour orbit: 25 percent and 40 percent at  $25^{\circ}$  C.
  - (4) Orbit Times:
    - (a) 3 hours--30-minute discharge and 150-minute charge.
    - (b) 24 hours--1-hour discharge and 23-hour charge.

e. Third Electrode Packs (Gulton):

(1) Ambient Temperatures:

- (a) 0° C.
- (b) 25° C.
- (c) 40° C.

(2) Voltage limits per pack on charge: None. Limit is controlled by the third electrode voltage:

- (a) 150 millivolts at 0° C.
- (b) 300 millivolts at 25° C.
- (c) 300 millivolts at 40° C.

(3) Depth of Discharge:

- (a) 25 percent and 40 percent at 0° C.
- (b) 25 percent and 40 percent at 25° C.
- (c) 15 percent and 25 percent at 40° C.

(4) Orbit Time: 90 minutes--30-minute discharge and 60-minute charge.

f. Third Electrode Packs (General Electric):

(1) Ambient Temperatures:

- (a) 0° C.
- (b) 25° C.
- (c) 40° C.

(2) Voltage limit per pack on charge: None. Limit is controlled by the third electrode voltage; 400 millivolts at all temperatures.

(3) Depth of Discharge:

- (a) 25 percent and 40 percent at 0° C.
- (b) 25 percent and 40 percent at 25° C.
- (c) 15 percent and 25 percent at 40° C.

(4) Orbit Time: 90 minutes--30-minute discharge and 60-minute charge.

g. Stabistor Packs:

(1) Ambient Temperatures:

- (a) -20° C.
- (b) 0° C.
- (c) 25° C.
- (d) 40° C.

(2) Voltage limits per pack on charge: None. Stabistor controls cell voltage.

(3) Depth of discharge:

- (a) 25 percent and 40 percent at -20° C.
- (b) 25 percent and 40 percent at 0° C.
- (c) 25 percent and 40 percent at 25° C.
- (d) 15 percent and 25 percent at 40° C.

(4) Orbit Time: 90 minutes--30-minute discharge and 60-minute charge.

h. Coulometer Packs:

(1) Ambient Temperature: 25° C.

(2) Voltage limit per pack on charge: None. Coulometer controls cell voltage.

(3) Depth of Discharge:

(a) 30 percent for 5 cells (Sonotone 5 a.h.)--coulometer built by Goddard Space Flight Center.

(b) 40 percent for 10 cells (Gulton 5.6 a.h.)--coulometer built by General Electric.

(4) Orbit Time: 90 minutes--30-minute discharge and 60-minute charge.

i. Sherfey Cycling Packs:\*

(1) Ambient Temperature: 25° C.

(2) Voltage limit per pack on charge: None. Pack cycled in the partially discharged state.

(3) Depth of Discharge: 40 percent at 25° C.

(4) Orbit Time: 90 minutes--30-minute discharge and 60-minute charge.

\* This type of cycling starts with the cells in a completely discharged condition. Each cycle consists of a charge of 60 percent of the cell's rated capacity followed by a discharge of 40 percent of the cell's rated capacity. Upon completion of each fifth cycle, the cells are discharged through a resistor for 90 minutes to return the cells to the completely discharged condition for the start of the next sequence of five cycles. In this manner, the cells operate below the 100 percent charged state much of the time thereby preventing overcharging and buildup of excessive gas pressure.

### 3. Data:

a. Under normal operation, complete data is scheduled to be recorded every 32 cycles on the 90-minute and 3-hour packs. On the 24-hour packs, complete data is taken every eight cycles.

b. The attached data sheets give end of discharge and end of charge voltage readings for each cell on each cycle recorded.

### 4. Capacity Tests:

a. Before cycling, each pack was given a capacity test at its respective cycling temperature. This check consisted of a c/10 charge for 16 hours followed by a c/2 discharge to 1.0 volt per cell average. After each 88 days of cycling, each pack was discharged immediately after the end of the regular cycle charge period, at the c/2 rate to 1.0 volt per cell average. The pack was then recharged at the c/10 rate for 16 hours and discharged at the c/2 rate to 1.0 volt per cell average. The pack was then recharged at the c/10 rate for 48 hours, voltage limited to the cycle limits. Data of capacity tests is tabulated on pages 53 through 61.



PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: General Electric 3.0 Ampere-Hour	
							FAILURE ANALYSIS	Nickel-Cadmium
15	25%	1.5	25°	432	7	8065	Low Volt Disch, Low Volt Chg, Blistering on Bottom Edge of Pos Plate, Migration of Neg Plate Material, Separator Completely Deteriorated.	
				414	8	8254	Low Volt Disch, Low Volt Chg, Blistering on Bottom Edge of Pos Plate, Migration of Neg Plate Material, Separator Completely Deteriorated.	
				479	5	8714	Low Volt Disch, Normal Volt Chg, Deposit on Terminal, Migration of Active Material, Blistering on Edge of Pos Plate, Separator Deteriorated.	
				267	10	10123	Low Volt Disch, Normal Volt Chg, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Deteriorated.	
				485	4	10382	Low Volt Disch, Low Volt Chg, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Deteriorated.	
16	40%	1.5	25°	447	9	10382	Low Volt Disch, Low Volt Chg, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Deteriorated.	
				427	7	3985	Low Volt Disch, Normal Volt Chg, Pos Tab Broken and Touching Case, Burned Tape on Tab Caused by Overheating From Poor Tab Weld.	
				58	6	4473	Low Volt Disch, Normal Volt Chg, Short on One Edge of Plates, Neg Plate Material Penetrated Separator.	
				361	1	4741	Low Volt Disch, Normal Volt Chg, Shorted, Separator Deteriorated, Neg Plate Material Penetrated Separator.	
				522	5	4917	Low Volt Disch, Low Volt Chg, Separator Impregnated with Neg Plate Material, Separator Deteriorated.	

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: General Electric 3.0 Ampere-Hour FAILURE Nickel-Cadmium ANALYSIS
16	40%	1.5	25°	456	10	4917	Low Volt Disch, Low Volt Chg, Separator Impregnated with Neg Plate Material, Separator Deteriorated.
39	15%	1.5	25°	719	4	5013	Low Volt Disch, Low Volt Chg, Separator Impregnated with Neg Plate Material, Separator Deteriorated, Several Small Burned Areas on Separator.
			50°	541	2	779	Low Volt Disch, High Volt Chg, Leaked, Shorted at Top of Core, Separator Too Short, Pos Tab Burned.
			40°	540	6	2083	Low Volt Disch, High Volt Chg, Leaked, Shorted at Top of Core, Separator Too Short, Pos Tab Burned.
			40°	549	7	2523	Low Volt Disch, High Volt Chg, Pos Tab Burned.
			40°	527	1	7213	Low Volt Disch, Normal Volt Chg, Deposit Around Pos Terminal, Pos Tab Burned, Migration of Neg Plate Material, Separator Deteriorated.
			40°	534	5	8109	Low Volt Disch, Normal Volt Chg, Leaked, Lost 3.5 gm, Pos Tab Burned, Migration of Active Material, Separator Deteriorated.
			40°	550	8	8109	Low Volt Disch, Normal Volt Chg, Pinpoint Penetration, Separator Deteriorated.
40	25%	1.5	40°	464	3	2073	Low Volt Disch, High Volt Chg, Shorted at Top of Core, Separator Too Short, Pos Tab Burned.
			40°	3131	8	2182	Low Volt Disch, Normal Volt Chg, Leaked, Loose Plate Material on Separator.
			40°	47	7	2182	Low Volt Disch, High Volt Chg, Shorted at Top of Core, Separator Too Short, Pos Tab Burned and Broken.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: General Electric 3.0 Ampere-Hour	
							FAILURE	ANALYSIS
40	25%	1.5	40°	49	5	2446	Low Volt Disch, High Volt Chg, Pos Weld to Terminal Stud Burned, Poor Weld.	Nickel-Cadmium
				45	10	2461	Low Volt Disch, High Volt Chg, Loose Plate Material on Separator, Short at Outside End of Pos Plate.	
				466	2	2509	Low Volt Disch, High Volt Chg, Leaked, Pos Tab Burned and Shorted to Neg Tab.	
43	15%	3.0	40°	441	6	2509	Low Volt Disch, High Volt Chg, Leaked, Shorted at Top of Core, Separator Too Short, Pos Tab Burned.	
				416	4	1182	Low Volt Disch, Low Volt Chg, Shorted at Top of Core, Separator Too Short, Pos Tab Burned.	
				499	3	1515	Low Volt Disch, High Volt Chg, Shorted at Top of Core, Separator Too Short, Pos Tab Burned and Broken.	
				412	6	1911	Showed Open Circuit at Start of Cycle, Pos Tab Broken, Burned Tape on Tab Caused by Overheating From Poor Tab Weld.	
				426	9	2298	Showed Open at Start of Cycle, Pos Tab Corroded, Pos Tab Broken, Top of Separator Burned, Separator Impregnated with Neg Plate Material, Separator Deteriorated.	
40	25%	1.5	40°	436	7	2515	Showed Open at Start of Cycle, Pos Tab Corroded, Pos Tab Broken, Poor Roll, Uneven Wind at End of Roll, Shorts at Top of Roll, Separator Deteriorated.	
				435	10	2656	Showed Open at Start of Cycle, Pos Tab Corroded, Pos Tab Broken, Separator Impregnated with Neg Plate Material, Separator Deteriorated.	

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: FAILURE ANALYSIS
44	25%	3.0	40°	222	6	1672	General Electric 3.0 Ampere-Hour Nickel-Cadmium Showed Open Circuit at Start of Cycle, Pos Tab Broken, Burned Tape on Tab Caused By Overheating From Poor Tab Weld.
			40°	366	8	3848	Low Volt Disch, High Volt Chg, Pinpoint Penetration, Separator Deteriorated, Blistering on Bottom Edge of Pos Plate.
			40°	459	1	3854	Shorted on Cycling, Deposit on Pos Terminal, Pinpoint Penetration, Separator Deteriorated.
			40°	77	3	3854	Low Volt Disch, Normal Volt Chg, Migration of Active Material, Separator Deteriorated.
			40°	3120	2	4487	Low Volt Disch, High Volt Chg, Deposit on Pos Terminal, Loose Active Pos Plate Material, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetrations, Blistering on Pos Plates, Separator Deteriorated.
			40°	296	10	4487	Low Volt Disch, Low Volt Chg, Deposit on Pos Terminal, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetrations, Blistering on Pos Plates, Separator Deterioration.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Gould 3.5 Ampere-Hour Failure Analysis
3	25%	1.5	25°	73	5	2785	Low Volt Disch, High Volt Chg, Short Near Center of Core, Piece of Pos Plate Material Between Plates Causing Short Through Separator.
				54	2	3090	Low Volt Disch, Low Volt Chg, Leaked, Lost 1.7 gm, Weak Weld on Neg Tab to Plate.
				165	9	4081	Low Volt Disch, Normal Volt Chg, Leaked, Lost 1.7 gm, Deposit on Glass Seal, Short Through Separator, Short at Pos Tab Near Center of Core, Neg Tab Weld to Plate Weak.
				93	6	4289	Low Volt Disch, Normal Volt Chg, Leaked Around Glass Seal, Lost 2.6 gm, Separator Deteriorated, Neg Plate Material Penetrated Separator.
				97	7	4401	Low Volt Disch, Normal Volt Chg, Leaked Around Glass Seal, Lost 2.5 gm, Separator Deteriorated, Neg Plate Material Penetrated Separator.
				77	4	4751	Low Volt Disch, Normal Volt Chg, Separator Deteriorated, Separator Impregnated with Neg Plate Material, Blistering on Pos Plates.
4	40%	1.5	25°	188	10	4751	Low Volt Disch, Normal Volt Chg, Leaked, Lost 2.1 gm, Neg Plate Material on Separator.
				81	7	1609	Low Volt Disch, Normal Volt Chg, Leaked, Lost 3.2 gm, High Pres Bulge Top.
				90	8	1827	Low Volt Disch, Low Volt Chg, Leaked, Lost 2.7 gm, High Pres Bulge Top.
				2	1	2110	Low Volt Disch, Low Volt Chg, Separator Deteriorated at Center of Core, Under Pressure When Opened.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gould 3.5 Ampere-Hour
							FAILURE ANALYSIS
4	40%	1.5	25°	43	6	2954	Low Volt Disch, Low Volt Chg, Leaked, Lost 1.3 gm, Plate Material on Separator.
			25°	27	3	3029	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Separator Deteriorated.
			25°	198	10	3164	Low Volt Disch, Low Volt Chg, Leaked, Lost 1.6 gm, Separator Deteriorated, Pos Plate Material Between Plates.
	25%	3.0	25°	49	2	3007	Low Volt Disch, Normal Volt Chg, Leaked Around Glass Seal, Lost 2.7 gm, Neg Plate Material Migrated Through Separator, Separator Deteriorated, One Weak Weld Pos Tab to Plate.
7			25°	37	1	3130	Low Volt Disch, Normal Volt Chg, Leaked, Lost 1.1 gm, Glass Seal Broken, Separator Very Dry, Neg Plate Material Migration, Pinpoint Penetration, Loose Neg Plate Material on Separator, Separator Deteriorated, All Tab Welds to Plate Weak.
			25°	109	6	3483	Low Volt Disch, Low Volt Chg, Leaked, Lost 2.0 gm, Deposit on Glass Seal, Separator Deteriorated, Pinpoint Penetration, Neg Plate Material on Separator, Weak Weld on One Tab to Pos Plate Weld.
			25°	104	5	3736	Shorted on Cycling, Deposit on Glass Seal, Leaked, Lost 1.1 gm, Weak Weld Pos Tab to Plate, Neg Plate Material on Separator, Pinpoint Penetration, Separator Deteriorated.
			25°	131	7	3884	Low Volt Disch, Normal Volt Chg, Deposit Around Glass Seal, Leaked, Lost 1.7 gm, Neg Plate Material Loose, Pinpoint Penetration, Separator Deteriorated.
			25°	62	3	4173	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Leaked, Lost 1.4 gm, One Weak Weld on Pos Tab to Plate, Pinpoint Penetration, Separator Deteriorated.

PAGE NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gould 3.5 Ampere-Hour FAILURE ANALYSIS
8	40%	3.0	25°	68	6	1346	Low Volt Disch, Low Volt Chg, Leaked, Lost 1.5 gm, Plate Material on Separator.
			25°	112	8	1704	Low Volt Disch, Normal Volt Chg, Leaked, Lost 2.0 gm, Pos Tab Weld to Bottom of Can Weak, Pos Tab Weld to Plate Weak.
			25°	39	1	1985	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Separator Deteriorated, Neg Plate Material on Separator.
			25°	170	10	1985	Low Volt Disch, Normal Volt Chg, Leaked, Lost 1.8 gm, Pos and Neg Tab Weld Weak to Plates Near Center of Core, Separator Deteriorated at Center of Core.
27	15%	1.5	25°	78	7	2138	Low Volt Disch, Low Volt Chg, Leaked Around Glass Seal, Lost 1.4 gm, Pos Tab Weld to Case Weak, Separator Deteriorated, Neg Plate Material Penetrated Separator.
			25°	41	2	2494	Low Volt Disch, Low Volt Chg, Leaked Around Glass Seal, Lost 1.7 gm, Separator Deteriorated, Neg Plate Material Impregnated Separator, One Bad Weld Neg Tab to Plate.
			25°	130	9	2494	Low Volt Disch, Low Volt Chg, Leaked Around Glass Seal, Lost 2.1 gm, Separator Deteriorated, Pos and Neg Plate Material Impregnated Separator.
			40°	13	3	2901	Low Volt Disch, Low Volt Chg, Leaked, Lost 1.5 gm, Separator Deteriorated, Pos Plate Material on Separator.
7			40°	195	8	2901	Low Volt Disch, Normal Volt Chg, Leaked, Lost 3.6 gm, Short Through Separator, Separator Burned at Center of Core, Pos Plate Material on Separator.
			40°	103	7	2998	Low Volt Disch, Normal Volt Chg, High Pres, Short Through Separator, Pieces of Pos Plate Material Between Plates.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Gould 3.5 Ampere-Hour Failure Analysis Nickel-Cadmium
27	15%	1.5	40°	200	10	3270	Low Volt Disch, Normal Volt Chg, Leaked, Lost 2.5 gm, Short Through Separator, Separator Deteriorated at Center of Core, Pos Tab Weld to Case Weak.
				197	9	4102	Low Volt Disch, High Volt Chg, Leaked Around Glass Seal, Lost 1.4 gm, Short at Pos Tab, Separator Deteriorated, Neg Plate Material Penetrated Separator.
				11	2	4485	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Separator Deteriorated, Separator Impregnated with Neg Plate Material.
				122	2	408	Low Volt Disch, Normal Volt Chg, Leaked, Lost 1.8 gm, Weak Bottom Weld Suspicious Spot but not Definite.
28	25%	1.5	40°	157	7	484	Low Volt Disch, Normal Volt Chg, Leaked, Lost 2.0 gm, High Pres Bulge.
				158	8	484	Low Volt Disch, Normal Volt Chg, Leaked, Lost 1.9 gm, High Pres Bulge Top.
				141	5	860	Low Volt Disch, High Volt Chg, Leaked, Lost 3.5 gm.
				168	10	1293	Low Volt Disch, High Volt Chg, Weak Weld to Bottom of Case.
				121	1	1811	Low Volt Disch, Low Volt Chg, Short at Outside End of Plates, Grid Wire Penetrated Separator.
				133	3	1811	Low Volt Disch, High Volt Chg, Weak Weld on Pos Tab to Case.
				140	4	1811	Low Volt Disch, Low Volt Chg, Short Around Pos Tab, Blistering on Pos Plate, Active Neg Plate Material on Separator.



PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: <u>Gould 3.5 Ampere-Hour</u> FAILURE <u>Nickel-Cadmium</u> ANALYSIS
28	25%	1.5	40°	155	6	1811	Low Volt Disch, Low Volt Chg, Short Through Separator, Weak Weld to Bottom of Case.
31	15%	3.0	40°	163	9	1811	Low Volt Disch, Low Volt Chg, Short Through Separator, Weak Weld to Bottom of Case, Deposit on Glass Seal.
			40°	R166	9	1500	Low Volt Disch, Low Volt Chg, Leaked, Lost 7.1 gm, Separator Deteriorated.
			40°	R179	10	1500	Low Volt Disch, Low Volt Chg, Leaked, Lost 1.5 gm, Short Through Separator, Separator Deteriorated, One Weak Tab.
			40°	R92	2	1696	Low Volt Disch, High Volt Chg, Pieces of Plate Material Shorted Through Separator, Separator Deteriorated.
			40°	126	3	2411	Low Volt Disch, Low Volt Chg, Leaked Around Glass Seal, Lost 2.1 gm, Short Through Separator by Piece of Pos Plate Material Between Plates, Separator Deteriorated, Neg Plate Material Impregnated Separator, Tab to Plate Weld Poor.
			40°	R162	8	2477	Low Volt Disch, High Volt Chg, Leaked Around Glass Seal, Lost 2.4 gm, Separator Deteriorated, Neg Plate Material Impregnated Separator, Pinpoint Penetration, Poor Weld Pos Tab to Case.
			40°	72	1	2517	Low Volt Disch, Low Volt Chg, Leaked Around Glass Seal, Lost 1.8 gm, Short Between Plates, Extra Piece of Pos Plate Between Plates, Separator Deteriorated, Pos Tabs to Plate Weld Both Weak.
			40°	143	6	2517	Low Volt Disch, Low Volt Chg, Short Through Separator at Start of Core, Extra Piece of Pos Plate Material, Separator Impregnated with Neg Plate Material, Separator Deteriorated, Neg Tab Weld to Pigtail Weak, One Tab to Pos Plate Weld Weak, Still Under Pressure When Opened.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gould 3.5 Ampere-Hour FAILURE ANALYSIS
32	25%	3.0	40°	125	6	138	Low Volt Disch, Normal Volt Chg, Bottom Weld Weak, Greenish Corrosion Inside at Neg Lead.
			40°	65	3	495	Low Volt Disch, Normal Volt Chg, Leaked, Lost 1.5 gm, Bad Glass Seal Around Neg Terminal.
			40°	1	1	800	Low Volt Disch, Normal Volt Chg, Leaked, Lost 3.2 gm, Shorts Near Center of Core.
			40°	67	4	875	Low Volt Disch, Low Volt Chg, Leaked, Lost 2.2 gm, Short Around Tabs, Pos Tab Weld Weak to Case.
			40°	132	7	875	Failed During Shut Down to Move to Another Chamber, Leaked, Lost 4.4 gm, High Pres. Neg Tabs Pushed Out of Cell, Short at Center and Outside Edge of Core.
			40°	149	9	974	Low Volt Disch, High Volt Chg, Leaked, Lost 1.1 gm, Piece of Pos Plate Material Shorted Through Separator, Weak Welds to Case and Plates.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Sonotone 5.0 Ampere-Hour FAILURE Nickel-Cadmium ANALYSIS
2	40%	1.5	25°	811	10	3155	Shorted on Cycling, Leaked Around Seal, High Pressure Bulge on Bottom, Insulators Brittle, Exposed Grid Wires at Center of Core Penetrated Separator Causing Large Burned Area at Short, Pos and Neg Tab Weld Poor.
			25°	3628	5	3992	Low Volt Disch, Normal Volt Chg, Leaked Around Seal, High Pres Bulge on Bottom, Hole in Separator Exposing Pos and Neg Plates, Neg Plate Material Penetrated Separator.
			25°	3613	2	4411	Low Volt Disch, Low Volt Chg, Two Pieces of Neg Plate Material Wore Hole in Separator at Scoring Mark, Burned Through Plates, Neg Tab Welds Poor, Separator Beginning to Deteriorate.
			25°	3630	6	5262	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Pos and Neg Plate Material on Separator, Separator Deteriorated, Neg Tab to Plate Welds Weak, Burn Marks on Separator at Tabs, High Pressure Bulge.
			25°	3631	7	5262	Low Volt Disch, Low Volt Chg, Uncoined Plate Edges Pierced Separator Causing Partial Shorts, Burn Marks Around Tab Areas, Weak Weld on All Tab to Plate Welds, Deep Pressure Points Caused by Scoring, Separator Torn at Start of Core Exposing Pos and Neg Plate, Separator Deteriorated, Neg Plate Material on Separator.
			25°	3611	1	6671	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, High Pressure Bulge, Excess Scoring, Migration of Pos and Neg Plate Material, Separator Completely Deteriorated.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Sonotone 5.0 Ampere-Hour	
							FAILURE	Nickel-Cadmium
							ANALYSIS	
25	15%	1.5	40°	4852	5	6348	Low Volt Disch, High Volt Chg, Separator Deteriorated, Large Burned Area at Center of Core, Pinpoint Penetration, Deep Scoring Caused Hole in Separator, Partial Shorts Around Edge of Plates, Deep Pressure Points Caused by Scoring.	
							Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, High Pressure Bulge, Short Caused by Excess Scoring, Migration of Pos and Neg Plate Material, Separator Completely Deteriorated.	
							Low Volt Disch, Low Volt Chg, Deposit on Glass Seal, Excess Scoring, Migration of Pos and Neg Plate Material, Separator Completely Deteriorated.	
							Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Hole in Separator Adjacent to Corner of Outside Neg Plates, Grid Wire Penetrated Separator and Shorted to Pos Plate, Separator Completely Deteriorated.	
							Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Hole Through Separator Near Edge of Plate Causing Short, Small Piece of Neg Plate Material Between Plates and Separator.	
							Low Volt Disch, Low Volt Chg, Deposit on Glass Seal, Neg Plate Material Migrated Through Separator, Separator Deteriorated, Weak Weld Tab to Neg Plate.	
26	25%	1.5	40°	4323	1	2487	Grid Wire Penetrated Separator at Tabs.	
							Shorted on Cycling, Slight Burn Adjacent to Neg Tab, Separator Deteriorated, Neg Plate Material Penetrated Separator, Tab Welds Weak.	
				6773	9	2902		

PAGE NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Sonotone 5.0 Ampere-Hour FAILURE ANALYSIS Nickel-Cadmium
26	25%	1.5	40°	7224	6	2993	Low Volt Disch, Normal Volt Chg, High Pres Bulge, Deposit Around Seal, Neg Tab Weld Weak, Neg Plate Material Penetrated Separator.
			40°	7232	7	2993	Low Volt Disch, Normal Volt Chg, High Pres Bulge, Deposit Around Seal, Pos Tab Weld Weak, Plate Broken at Pos Tab, Deep Pressure Points From Scoring, Separator Completely Deteriorated.
			40°	4881	3	3344	Shorted on Cycling, Complete Short From Deep Scoring, Plate Shorted Through Outer Wrap.
			40°	4240	4	3625	Low Volt Disch, Low Volt Chg, Separator Deteriorated, Plate Material Penetrated Separator.
30	25%	3.0	40°	3657	7	855	Hole in Separator Allowing Pos Plate to Hit Case, Separator Damaged at Center of Cell Allowing Pos and Neg Plate to Short Together.
			40°	3643	4	3068	Low Volt Disch, Low Volt Chg, Separator Completely Deteriorated, Neg Tab to Plate Welds Weak, Burn Spots Around Tabs, Deep Scoring Caused Burn Spots on Separator.
			40°	809	9	3068	Low Volt Disch, Low Volt Chg, Deposit Around Glass Seal, Burn Spots Around Edge of Separator Caused By Uncoined Edge of Plates, Deep Scoring Caused Burn Spots on Separator, Burn Spots Around Tab Areas, Separator Deteriorated.
			40°	3658	8	3684	Low Volt Disch, Low Volt Chg, Deposit on Glass Seal, Leaked, Lost 1.3 gm, Short Caused by Excess Scoring, Migration of Pos and Neg Plate Material, Separator Completely Deteriorated.
			40°	3617	1	4141	Shorted During Cycling, Deposit on Glass Seal, Hole in Separator at Tab Weld Area Caused Short, Separator Completely Deteriorated.
			40°	7230	10	4141	Low Volt Disch, Low Volt Chg, Deposit on Glass Seal, Migration of Neg Plate Material, Separator Completely Deteriorated.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Gulton 6.0 Ampere-Hour Failure Analysis Nickel-Cadmium
13	25%	1.5	25°	2305	1	308	Low Volt Disch, High Volt Chg, Lost 12 gm, CO <sub>2</sub> Top Ceramic, High Pres Bulge.
			25°	2355	10	502	Low Volt Disch, High Volt Chg, Lost 10 gm, High Pres Bulge.
			25°	3134	5	2969	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plates.
			25°	3211	7	3084	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plates.
			25°	2613	4	3598	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plate, Separator Deteriorated.
			25°	2324	2	4021	Low Volt Disch, Low Volt Chg, Ceramic Short, Separator Deteriorated, Separator Impregnated with Neg Plate Material, Blistering on Pos Plates, High Pres Bulge.
14	40%	1.5	25°	1623	4	262	Low Volt Disch, High Volt Chg, Lost 12 gm, High Pres Bulge.
			25°	1635	5	262	Voltage Fell Off During Charge, Went Flat in 3 Min. on Disch, Lost 6 gm, Concave Wall, High Pres Bulge, Ceramic Broken Inside Case, CO <sub>2</sub> on Outside of Ceramic, Pos Terminal Loose.
			25°	2356	1	450	Low Volt Disch, High Volt Chg, Lost 12 gm, High Pres.
			25°	2387	2	1113	Low Volt Disch, High Volt Chg, Ceramic Short.
			25°	2391	3	1618	Low Volt Disch, Low Volt Chg, Ceramic Short.
			25°	3208	7	2086	Low Volt Disch, Normal Volt Chg, Ceramic Short.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: <u>Gulton 6.0 Ampere-Hour</u> FAILURE ANALYSIS
17	25%	3.0	25°	1862	5	721	Low Volt Disch, High Volt Chg, Ceramic Short.
			25°	1823	3	721	Low Volt Disch, High Volt Chg, High Pres Bulge, Burnt Spot on Neg Plate Near Bottom Second From End, Ceramic Short.
			25°	2348	10	1688	Low Volt Disch, Low Volt Chg, Ceramic Short.
			25°	1757	1	2375	Low Volt Disch, Low Volt Chg, Ceramic Short, Deposit Around Ceramic Seal, High Pres Bulge.
			25°	1598	2	2449	Low Volt Disch, Low Volt Chg, Pinpoint Penetration of Separator, Blistering on Pos Plate, High Pres Bulge.
			25°	2347	9	2885	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plates, High Pressure Bulge, Still Under Pressure When Opened.
18	40%	3.0	25°	1826	6	365	Low Volt Disch, Chg Volt Normal, Lost 3 gm, Concave Wall, Ceramic Short.
			25°	1615	3	608	Low Volt Disch, Normal Volt Chg, Deposit on Top of Pos Terminal, Lost 5.1 gm, High Pres Bulge.
			25°	1827	7	643	Low Volt Disch, High Volt Chg, High Pres Bulge, Ceramic Short.
			25°	2228	9	643	Low Volt Disch, High Volt Chg, Ceramic Short.
			25°	1562	5	1145	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plates.
			25°	1233	1	1550	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plate, Neg Plate Material on Separator.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Failure Analysis
37	15%	1.5	50°	1764	3	238	CELL TYPE: Gulton 6.0 Ampere-Hour Nickel-Cadmium
							Low Volt Disch, Volt Did Not Increase on Following Chg, (1.00 V) Lost 4 gm, Ceramic Short.
				1784	8	1566	Low Volt Disch, Low Volt Chg, Lost 10.5 gm, Ceramic Short.
				1802	4	2819	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plate.
				2333	10	2981	Low Volt Disch, Normal Volt Chg, Ceramic Short, Blistering on Pos Plates.
				1769	7	4897	Low Volt Disch, Normal Volt Chg, Ceramic Short, Leaked, Lost 1 gm, Blistering on Pos Plate, Separator Deteriorated.
38	25%	1.5	50°	1814	6	6064	Low Volt Disch, High Volt Chg, Deposit on Pos Terminal, Separator Deteriorated, Neg Plate Material on Separator, Blistering on Pos Plates, Ceramic Short.
				1454	8	37	No Volt on Chg or Disch, Ceramic Short.
				1815	6	114	Volt Fell Off During Disch, Chg Volt Slightly Low, Lost 3.5 gm, Ceramic Short.
				1853	9	187	Rev on Disch, Chg Volt Normal, Lost 4 gm, Deposits Around Pos Terminal (Outside), Ceramic Short.
				1627	3	225	Low Volt Disch, High Volt Chg on Cycle 219, Dead on 225, Lost 3.5 gm.
				2405	5	1333	Low Volt Disch, Normal Volt Chg, Pos Bus Shorted to Case.
			40°	1626	2	1377	Low Volt Disch, Low Volt Chg, High Pres Bulge, Ceramic Short.



PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gould 20 Ampere-Hour	
							FAILURE ANALYSIS	Nickel-Cadmium
119	40%	3.0	25°	73	5	222	Normal Volt Disch, Low Volt Chg, Short Near Bottom of 5th or 6th Pos, No Obvious Cause.	
			25°	80	2	1793	Low Volt Disch, Normal Volt Chg, Neg Plate Material Penetrated Separator, High Pressure, Blistering on Pos Plate.	
			25°	86	3	1793	Low Volt Disch, Normal Volt Chg, Neg Plate Material Penetrated Separator, High Pressure, Blistering on Pos Plate.	
122	25%	3.0	40°	16	2	801	Low Volt Disch, Low Volt Chg, Blistering on Pos Plates, Separator Deteriorated, Plate Material on Both Sides of Separator, High Pressure.	
			40°	58	3	801	Low Volt Disch, Low Volt Chg, Blistering on Pos Plates, Separator Deteriorated, Plate Material on Both Sides of Separator, High Pressure.	
			40°	18	5	983	Low Volt Disch, Low Volt Chg, Plate Material Penetrated Separator, Pos Plates Blistered, High Pressure.	
126	25%	1.5	40°	9	3	1273	Low Volt Disch, Low Volt Chg, Shorted at Bottom Corner of Neg Plate, Grid Wire Penetrated Separator, Several Other Plates Had Grid Wires Sticking Out, High Pressure.	
			40°	R29	4	1509	Low Volt Disch, Low Volt Chg, Shorted at Bottom Corner of Pos Plate, Grid Wire Penetrated Separator, Blistering on Pos Plates, Separator Deteriorated, High Pressure.	
			40°	11	5	1569	Low Volt Disch, Low Volt Chg, Shorted on Side of Pos Plate, Grid Wire Penetrated Separator, High Pressure.	

PAGE NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: <u>Gulton 50 Ampere-Hour</u>  FAILURE ANALYSIS <u>Nickel-Cadmium</u>
95	25%	1.5	0°	109	3	2643	Shorted Out While Cycling, All Plates Shorted at Bottom Center, Separator Very Dry and Stiff From Heat, Blistering on Pos Plate.
			0°	107	5	2938	Shorted Out While Cycling, Short Between Plates at Center Near Bottom of Plates, Separator Dry, Small Amount of Neg Plate Material Migration on Separator.
			0°	115	1	3227	Low Volt Disch, High Volt Chg, Separator Impregnated with Neg Plate Material, Large Blisters on Pos Plate, One Neg Plate Stuck to Can.
123	15%	1.5	40°	119	2	1873	Low Volt Disch, Low Volt Chg, Separator Decomposed, Hot Spots Through Separator Shorted Out Several Plates, High Pres Bulge, Still Under Pressure When Opened.
			40°	118	3	1873	Went Dead During Shutdown, Separator Decomposed, Several Small Hot Spots on Each Plate, Outside Neg Plates Stuck to Case, High Pres Bulge, Deposit Around Ceramic Seal of Pos Terminal.
			40°	117	4	1873	Went Dead During Shutdown, Separator Decomposed, Neg Plate Stuck to Case, High Pres Bulge, Still Under Pressure When Opened.

PAGE NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: <u>Delco 25 Ampere-Hour</u>  FAILURE ANALYSIS
75	40%	24.0	25°			32	Cell Blew Up, Pack Returned to Manufacturer.
89	40%	24.0	25°			80	Returned to Manufacturer for Analysis.
288	40%	3.0	25°			120	Returned to Manufacturer for Analysis.

Pack Number	275	Depth of Discharge	25%	Orbit Period (Hours)	24.0	Test Temperature	25°	Cell Number	Position in Pack	Cycles Completed	139	Cell Type: Delco 40 Ampere-Hour Failure Analysis	Silver-Zinc	Returned to Manufacturer for Analysis.
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PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Yardney 12 Ampere-Hour FAILURE ANALYSIS Silver-Cadmium
33	50%	24.0	40°		3	58	Leaked, Dried Out.
					2	126	Leaked, Dried Out.
					1	152	Leaked, Dried Out.
					8	197	Leaked, Dried Out.
					4	210	Leaked, Dried Out.
					10	210	Leaked, Dried Out.
					1	162	Leaked, Electrolyte Shorted Out Cell.
57	50%	24.0	0°		2	162	Leaked, Electrolyte Shorted Out Cell.
					10	162	Leaked, Electrolyte Shorted Out Cell.
					3	166	Leaked, Electrolyte Shorted Out Cell.
					4	166	Leaked, Electrolyte Shorted Out Cell.
					5	166	Leaked, Electrolyte Shorted Out Cell.
					6	166	Leaked, Electrolyte Shorted Out Cell.
					7	166	Leaked, Electrolyte Shorted Out Cell.
					8	166	Leaked, Electrolyte Shorted Out Cell.
					9	166	Leaked, Electrolyte Shorted Out Cell.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: General Electric 3.0 Ampere-Hour FAILURE ANALYSIS
20	40%	3.0	25°	421	5	3704	Nickel-Cadmium Low Volt Disch, Low Volt Chg, Blistering on Bottom and Top Edge of Pos Plate, Migration of Neg Plate Material, Separator Completely Deteriorated.
			25°	433	2	4485	Low Volt Disch, Low Volt Chg, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Deteriorated, Burned Pos Tab.
			25°	711	6	4485	Low Volt Disch, Low Volt Chg, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetrations, Blistering on Pos Plates, Separator Deteriorated, Deposit on Pos Terminal.
			25°	710	3	4889	Shorted on Cycling, Deposit on Pos Terminal, Migration of Neg Plate Material Through Separator, Hot Spots Around Pinpoint Penetrations, Blistering on Pos Plates, Separator Deteriorated.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Gould 3.5 Ampere-Hour Failure Analysis Nickel-Cadmium
52	25%	1.5	0°	116	8	7858	Low Volt Disch, Low Volt Chg, Still Under Pressure When Opened, Neg Plate Material on Separator, Excess Migration of Neg Plate Material, Separator Deteriorated.
			0°	194	10	8367	Low Volt Disch, Normal Volt Chg, Under High Pressure When Opened, Pinpoint Penetration, Migration of Active Material Around Tab Areas.
			0°	108	7	9724	Low Volt Disch, High Volt Chg, Loose Active Pos Plate Material, Migration of Neg Plate Material Through Separator, Separator Deteriorated.
			0°	118	9	9724	Low Volt Disch, Low Volt Chg, Loose Active Pos Plate Material, Migration of Neg Plate Material Through Separator, Separator Deteriorated.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Sonotone 5.0 Ampere-Hour FAILURE Nickel-Cadmium ANALYSIS
1	25%	1.5	25°	4361	4	2995	Low Volt Disch, High Volt Chg, Inclusion on Surface of Outside Pos Plate Wore Hole Through Separator and Thin Outside Wrap, Separator Sticking to Neg Plate, Glass Seal Leaked.
			25°	4335	1	4423	Low Volt Disch, High Volt Chg, Neg Tabs Weak Weld to Plates, Separator Melted at Center of Core, Extreme Pressure Points on Separator From Scoring Causing High Resistance Shorts.
			25°	4878	6	7782	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Short Caused by Excess Scoring, Migration of Neg Plate Material, Separator Completely Deteriorated.
5	25%	3.0	25°	4351	2	3771	Low Volt Disch, High Volt Chg, Deposit on Glass Seal, Excess Scoring, Migration of Neg Plate Material, Deep Pressure Points Resulting in Intermittant Shorts, Separator Deteriorated.



PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Sonotone 5.0 Ampere-Hour
							FAILURE ANALYSIS
6	40%	3.0	25°	4324	8	1069	Low Volt Disch, Normal Volt Chg, Separator Impregnated With Active Material, Separator Sticking to Neg Plate.
				6904	10	1136	Low Volt Disch, Low Volt Chg, Small Hole in Separator at Start of Coil, Pos Plate Edge Broken Allowing Grid Wire to Penetrate Separator.
				3637	4	1161	Grid Wires of Pos Plate Penetrated Separator and Shorted to Neg Plate, Active Plate Material Penetrated Separator at Three Points, Bad Tab Welds.
				6875	9	3798	Low Volt Disch, Normal Volt Chg, High Pressure Bulge, Excess Scoring, Migration of Pos and Neg Plate Material, Separator Completely Deteriorated.
				6882	7	4608	Low Volt Disch, Normal Volt Chg, Excess Scoring, Shorts at Edge of Plates, Neg Tab Area, and at Scoring, Weak Weld Neg Plate to Tab, Separator Deteriorated.
				3626	1	1418	Shorted on Cycling, Neg Tab Welds Poor, Active Plate Material Penetrated Separator at Scoring Marks.
29	15%	3.0	40°	810	7	4835	Low Volt Disch, Low Volt Chg, Deposit on Glass Seal, Burn Spots Along Top Edge of Neg Plate, Hole Burned in Separator, Weak Weld Neg Tab to Plate.
				4327	8	4340	Low Volt Disch, Normal Volt Chg, Deposit on Glass Seal, Hole in Separator Adjacent to Score Band, Separator Completely Deteriorated.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: <u>Sonotone 5.0 Ampere-Hour</u>  FAILURE ANALYSIS
49	15%	1.5	0°	6887	9	2010	Low Volt Disch, Low Volt Chg, Burn on Separator Opposite Pos Tab.
			0°	4370	3	10073	Shorted During Cycling, Short Through Separator Caused By Deep Pressure Points Adjacent to Scoring, Migration of Neg Plate Material, Small Inclusion on Plates Starting to Penetrate Through Separator.



PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gulton 6.0 Ampere-Hour	
							FAILURE ANALYSIS	Nickel-Cadmium
62	25%	1.5	0°	1630	10	2995	Low Volt Disch, High Volt Chg, Leaked, Lost 6.8 gm, Ceramic Seal Broke, Deposit on Inside of Ceramic, High Pres Bulge, Blistering on Pos Plates.	
				1792	4	4066	Low Volt Disch, Low Volt Chg, Small Shorts Through Separator Near Pos Tab, Blistering on Pos Plate, Separator Deteriorated.	
				1806	5	4441	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plates, High Pres Bulge.	
				2227	7	8590	Low Volt Disch, Low Volt Chg, High Pressure Bulge, Still Under Pressure When Opened, Pinpoint Penetration, Blistering on Pos Plates, Ceramic Short.	
65	15%	3.0	0°	1284	4	5012	Low Volt Disch, Low Volt Chg, Deposit on Pos Terminal, Still Under Pressure When Opened, Concave Sides, Edge of Pos Tab Shorted to Top of Neg Plates, Very Light Migration of Neg Plate Material, Blistering on Pos Plates.	

PACK NUMBER	238	DEPTH OF DISCHARGE	25%	ORBIT PERIOD (HOURS)	1.5	TEST TEMPERATURE	40°	CELL NUMBER	5321	POSITION IN PACK	5	CYCLES COMPLETED	4350	CELL TYPE: <u>Gulton 6.0 Ampere-Hour (HSI)</u>  FAILURE ANALYSIS <u>Nickel-Cadmium</u>
Low Volt Disch, Low Volt Chg, Still Under Pressure When Opened, Pos Tab Burned, Migration of Neg Plate Material, Blistering on Pos Plate, Separator Completely Deteriorated, Neg Plate Shorted Through Separator.														

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: General Electric 12.0 Ampere-Hour Failure Analysis Nickel-Cadmium
82	25%	1.5	25°	430	2	7527	Low Volt Disch, Normal Volt Chg, Pierced Separator Caused By Rough Place at Top Edge of Neg Plate, Neg Plate Material Migrated, Separator Deteriorated.
124	25%	1.5	0°	410	5	3037	Cell Lost Capacity on Cycling But Came Back When Removed From Pack, So It was Put Back on Cycling in Same Pack.

PACK NUMBER	102	DEPTH OF DISCHARGE	15%	ORBIT PERIOD (HOURS)	3.0	TEST TEMPERATURE	0°	CELL NUMBER	449	POSITION IN PACK	2	CYCLES COMPLETED	135	CELL TYPE: <u>Culton 20 Ampere-Hour</u>  FAILURE ANALYSIS	Nickel-Cadmium  Volt Fell Suddenly at End of Chg, Burn Spots at Busses, Concave Around Spots, End Neg Pushed Into Pos Tab.
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Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	CELL TYPE: Gould 20 Ampere-Hour FAILURE ANALYSIS Nickel-Cadmium
98	25%	1.5	0°	77	5	3556	Low Volt Disch, Low Volt Chg, Separator Deteriorated, Neg Plate Material Penetrated Separator, Two Pos Plates Not Welded to Tabs.
			0°	47	1	8619	Low Volt Disch, Low Volt Chg, High Pressure Bulge, Pieces of Loose Neg Plate Material Between Plates, Migration of Neg Plate Material, Separator Deteriorated, Short Through Separator at Bottom of Plates Where Tape Holds Plates Together.
105	25%	3.0	25°	40	1	4306	Low Volt Disch, Low Volt Chg, Still Under Pressure When Opened, Hot Spots Around Pinpoint Penetration, Deep Penetration by Blisters on Pos Plate, Separator Deteriorated.
108	15%	3.0	40°	81	2	4003	Shorted on Cycling, Still Under Pressure When Opened, Several Shorts Caused by Small Pieces of Metal Between Plates, Blistering on Pos Plates, Separator Deteriorated.
			40°	82	3	4233	Shorted During Cycling, Still Under Pressure When Opened, Loose Pieces of Pos Plate Material Between Plates, Pinpoint Penetration, Blistering on Pos and Neg Plates, Separator Deteriorated, Short Between Pos Plate and Neg Tab at Top of Cell.



PACK NUMBER	202	DEPTH OF DISCHARGE	40%	ORBIT PERIOD (HOURS)	1.5	TEST TEMPERATURE	25°	CELL NUMBER	A3553	POSITION IN PACK	3	CYCLES COMPLETED	1630	CELL TYPE: Sonotone 3.0 Ampere-Hour FAILURE ANALYSIS Nickel-Cadmium
Low Volt Disch, Normal Volt Chg, Cell Very Dry, Capacity Decay Due to Insufficient Electrolyte, Migration of Plate Material Around Tab and Scoring Areas.														

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gulton 6.0 Ampere-Hour (Third Electrode)	
							FAILURE	Nickel-Cadmium ANALYSIS
11	25%	1.5	25°	147	3	2753	Third Electrode Shorted to Pos, Ceramic Short, Blistering on Pos Plates, Separator Deteriorated, Leaked, Lost 1.3 gm.	
59	25%	1.5	0°	140	3	3202	Third Electrode Shorted to Neg Plate, Migration of Neg Plate Material, Shorted out Third Electrode, High Pressure Bulge, Still Under Pressure When Opened, Lost 1.4 gm.	
71	40%	1.5	0°	130	5	2993	Low Volt Disch, High Volt Chg, Deposit on Neg Terminal, Leaked, Lost 8.7 gm, High Pressure Bulge, Large Deposits of Loose Active Neg Plate Material, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates.	

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE:  FAILURE ANALYSIS
Sherfey	40%	1.5	25	106	2	2409	Gulton 3.6 Ampere-Hour Nickel-Cadmium Low Volt Disch, Low Volt Chg, Deposit on Edge of Top to Side Weld, Leaked, Lost 3.9 gm., Loose Active Material Pos and Neg, Pinpoint Penetration, Separator Very Dry.

\* Failed During This Reporting Period

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gulton 6.0 Ampere-Hour FAILURE ANALYSIS Nickel-Cadmium
41	15%	3.0	40°	1771	9	649	Low Volt Disch, High Volt Chg, Ceramic Short.
			40°	1801	6	1062	Low Volt Disch, Normal Volt Chg, Ceramic Short.
			40°	3135	2	1132	Low Volt Disch, Normal Volt Chg, Ceramic Short.
			40°	1852	7	1157	Low Volt Disch, Normal Volt Chg, Ceramic Short, Blistering on Pos Plates.
			40°	2221	8	1157	Low Volt Disch, Normal Volt Chg, Ceramic Short.
			40°	1632	3	1689	Low Volt Disch, Normal Volt Chg, Ceramic Short, Blistering on Pos Plates.
42	25%	3.0	50°	2309	8	96	Low Volt Disch, Normal Volt Chg, Ceramic Short.
			40°	2345	7	382	Low Volt Disch, Low Volt Chg, CO <sub>3</sub> on Bottom of Case, Ceramic Short.
			40°	2306	9	416	Low Volt Disch, High Volt Chg, Ceramic Short.
			40°	918	1	484	Low Volt Disch, Low Volt Chg, High Pres Bulge, Deposit on Bottom of Case, Ceramic Short, Lost 3.1 gm.
			40°	2340	6	3619	Low Volt Disch, Normal Volt Chg, Deposit Around Ceramic Seal and Bottom Seam of Can, Leaked, Lost 8.2 gm, Pinpoint Penetration, Separator Deteriorated.
			40°	2334	4	4133	Low Volt Disch, Low Volt Chg, Deposit Around Cracked Pos Terminal, Leaked, Lost 8.8 gm, Migration of Neg Plate Material, Blistering on Pos Plates, Separator Completely Deteriorated, Ceramic Short.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Gulton 6.0 Ampere-Hour Failure Analysis Nickel-Cadmium
61	15%	1.5	0°	1622	2	1	Volt Between 0.25 and 0.3 V Throughout Cycle, Side Concave, Burnt Case, End Neg Pushed Into Pos Tab. Cell Replaced in Pack Due to Early Failure.
			0°	1845	8	6	Lost 5 gm, Leak at Weld on Bottom, High Pres Bulge, Cell Replaced in Pack Due to Early Failure.
			0°	2397	5	2762	Low Volt Disch, Low Volt Chg, Ceramic Short.
			0°	1825	4	4094	Low Volt Disch, Low Volt Chg, Ceramic Short, Separator Impregnated with Neg Plate Material, Blistering on Pos Plates, High Pres Bulge.
			0°	2311	10	4285	Low Volt Disch, Low Volt Chg, Ceramic Short, Separator Impregnated with Neg Plate Material, Blistering on Pos Plates, High Pres Bulge.
			0°	2400	6	4413	Low Volt Disch, Low Volt Chg, Ceramic Short, Blistering on Pos Plates, High Pres Bulge.
			0°	1636	3	*9760	Low Volt Disch, Low Volt Chg, High Pres Bulge, Concave Sides, Leaked, Lost 2.7 gm, Rough Place on Pos Plate Shorted Through Separator, Migration of Neg Plate Material Through Separator, Blistering on Pos Plates, Separator Deteriorated, Ceramic Short.
			0°	1616	1	*10146	Low Volt Disch, High Volt Chg, Deposit on Pos Terminal, Concave Sides Causing Bus to Short Against Case, Pos Tab Burned, Migration of Neg Plate Material Through Separator, Separator Very Slightly Deteriorated, Leaked, Lost 6.0 gm.

\* FAILED DURING THIS REPORTING PERIOD.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gulton 6.0 Ampere-Hour FAILURE ANALYSIS Nickel-Cadmium
66	25%	3.0	0°	1794	6	1045	Low Volt Disch, High Volt Chg, High Pres Bulge, Concave Side, Ceramic Broken, No Seal, Lost 5.1 gm, Pos Bus Against Case.
				1843	8	1173	Low Volt Disch, Low Volt Chg, Wall Concave, Ceramic Short.
				1781	5	1237	Low Volt Disch, High Volt Chg, High Pres Bulge, Deposit Around Pos Terminal, Ceramic Broken on Pos Terminal, Blisters on Pos Plate, Burnt Spot on Separator at Blisters, Lost 1.3 gm.
				1634	3	1417	Low Volt Disch, Normal Volt Chg, Ceramic Short, High Pres Bulge, One Side Concave Other Convex, Pos Plates Blistered, Lost 2.3 gm.
				1823	7	2122	Low Volt Disch, Low Volt Chg, Leaked, Lost 7.8 gm, Separator Impregnated with Neg Plate Material, Blistering on Pos Plates, High Pres Bulge, One Side Concave.
79	50%	24.0	25°	1591	4	4414	Low Volt Disch, Normal Volt Chg, Deposit on Pos Terminal, High Pressure Bulge, Concave Sides Shorting Against Pos Bus, Ceramic Short, Migration of Neg Plate Material, Pinpoint Penetration of Separator.
				2982	1	149	Low Volt Disch, Normal Volt Chg, Deposit on Pos Terminal, Still Under Pressure When Opened, Ceramic Short, Very Light Migration, Blistering on Pos Plates, Separator Deteriorated.
				2984	3	164	Low Volt Disch, Low Volt Chg, Still Under Pressure When Opened, Ceramic Short, Pinpoint Penetration, Blistering on Pos Plates, Separator Deteriorated.
				2983	2	545	Low Volt Disch, Normal Volt Chg, Burned Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Deteriorated.
				2985	4	545	Low Volt Disch, Normal Volt Chg, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Deterioration.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: General Electric 12.0 Ampere-Hour Failure Analysis Nickel-Cadmium
85	15%	1.5	40°	428	4	8888	Low Volt Disch, Low Volt Chg, High Pressure Bulge, Still Under Pressure When Opened, Migration of Neg Plate Material, Separator Completely Deteriorated.
			40°	448	3	8947	Low Volt Disch, Low Volt Chg, High Pressure Bulge, Still Under Pressure When Opened, Migration of Neg Plate Material, Separator Completely Deteriorated.
			40°	455	2	9710	Low Volt Disch, Normal Volt Chg, Still Under Pressure When Opened, Migration of Neg Plate Material, Separator Completely Deteriorated.
93	50%	24.0	40°	208	2	266	Low Volt Disch, Normal Volt Chg, Was Opened Up But Did Not Show Anything to be Wrong with Cell, Failure Due to Loss of Capacity.
			40°	204	1	349	Low Volt Disch, Normal Volt Chg, Deposit on Pos Terminal, Pinpoint Penetration, Separator Deteriorated.
			40°	209	3	349	Low Volt Disch, Normal Volt Chg, Deposit on Pos and Neg Terminal, Migration of Neg Plate Material, Separator Deteriorated.
			40°	210	4	349	Low Volt Disch, Normal Volt Chg, Deposit on Neg Terminal, Pinpoint Penetration, Separator Deteriorated.
			40°	211	5	349	Low Volt Disch, Normal Volt Chg, Deposit on Neg Terminal, Migration of Neg Plate Material, Separator Deteriorated, Plate Not Packed Evenly.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: General Electric 12.0 Ampere-Hour
							FAILURE ANALYSIS
96	40%	1.5	25°	445	3	3822	Low Volt Disch, Low Volt Chg, Separator Penetrated by Neg Plate Material, Pinpoint Shorts Through Separator.
				446	2	4020	Low Volt Disch, Low Volt Chg, Separator Penetrated by Neg Plate Material, Pinpoint Shorts Through Separator.
				442	4	4020	Low Volt Disch, Low Volt Chg, Separator Penetrated by Neg Plate Material, Pinpoint Shorts Through Separator.
				438	2	3894	Low Volt Disch, Low Volt Chg, Deposit on Pos and Neg Terminals, Pinpoint Penetration, Separator Deteriorated.
97	40%	3.0	25°	435	3	3946	Low Volt Disch, Normal Volt Chg, Still Under Pressure When Opened, Migration of Neg Plate Material, Blistering on Pos Plate, Separator Deteriorated.
				434	4	5002	Low Volt Disch, Normal Volt Chg, Still Under Pressure When Opened, Migration of Neg Plate Material, Separator Completely Deteriorated.
				429	3	3841	Shorted on Cycling, Separator Penetrated by Neg Plate Material, Pinpoint Shorts Through Separator, Leaked at Neg Terminal, Epoxy Lifted Up.
99	25%	1.5	40°	432	2	3841	Failed During Shut Down of Pack, Separator Deteriorated, Separator Impregnated with Neg Plate Material.
				440	1	4853	Low Volt Disch, Low Volt Chg, Separator Deteriorated, Separator Impregnated with Neg Plate Material.



PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: FAILURE ANALYSIS
100	25%	3.0	40°	427	3	4170	<u>General Electric 12.0 Ampere-Hour</u> Nickel-Cadmium
			40°	431	2	4358	Shorted on Cycling, High Pressure Bulge, Still Under Pressure When Opened, Blistering on Pos Plates, Separator Completely Deteriorated.
			40°	436	1	4424	Shorted on Cycling, High Pressure Bulge, Still Under Pressure, Migration of Neg Plate Material, Separator Completely Deteriorated.  Shorted on Cycling, Migration of Neg Plate Material Through Separator, Separator Completely Deteriorated.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gulton 12 Ampere-Hour	
							FAILURE ANALYSIS	Nickel-Cadmium
290	25%	1.5	40°	1460	4	3060	Low Volt Disch, Low Volt Chg, Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated Allowing Plates to Short Together.	
							Shorted on Cycling, Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated Allowing Plates to Short Together.	
							Low Volt Disch, Low Volt Chg, High Pressure Bulge, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated.	
296	40%	1.5	25°	1447	4	5036	Low Volt Disch, Normal Volt Chg, Piece of Loose Neg Plate Material Between Plates, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated.	
							Shorted on Cycling, High Pressure Bulge, Blistering on Pos Plates, Separator Completely Gone, Hottest Point Near Center of Pack, All Insulators Burned, Leaked, Lost 3.3 gm.	
							Low Volt Disch, Low Volt Chg, Deposit on Both Terminals, High Pressure Bulge, Migration of Neg Plate Material, Short Through Separator Near Center of Plate, Separator Completely Deteriorated.	
			25°	1445	3	5152		

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gulton 20 Ampere-Hour
							FAILURE ANALYSIS
73	25%	1.5	25°	396	3	1776	Low Volt Disch, Normal Volt Chg, Concave Side, Neg Ceramic Seal Broken, Lost 23.7 gm.
							Low Volt Disch, Low Volt Chg, Lost 13.2 gm, Separator Completely Deteriorated, Neg Plate Material Migration, Pinpoint Penetration, Blistering on Pos Plates, High Pressure Bulge.
							Low Volt Disch, Low Volt Chg, Deposit on Pos Terminal, Sides Concave, Migration of Active Plate Material, Blistering on Pos Plates, Separator Completely Deteriorated, Ceramic Short.
							Low Volt Disch, Low Volt Chg, Leaked, Lost 14.2 gm, Blistering on Pos Plates.
74	25%	3.0	25°	458	4	1184	Low Volt Disch, Normal Volt Chg, Leaked, Lost 21.9 gm.
							Low Volt Disch, Normal Volt Chg, Leaked Around Both Terminals, Ceramic Broken on Neg Terminal, Lost 18.0 gm, Neg Plate Material Penetrated Separator, Sides Concaved, Shorting Case to Bus.
							Shorted on Cycling, Deposit on Neg Terminal, Ceramic Broken Around Neg Terminal, Extraneous Active Material Caused Short Between Plates, Separator Completely Deteriorated.
							Cell Shorted During Shut Down for Cell Removal, High Pressure Bulge, Still Under Pressure When Opened, Pinpoint Penetration, Causing Shorts, Separator Completely Deteriorated.
76	15%	1.5	40°	453	2	7697	Shorted During Cycling, High Pressure Bulge, Still Under Pressure When Opened, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated, Short on Upper Corner Near Neg Tab.
76	15%	1.5	40°	431	4	7698	Shorted During Cycling, High Pressure Bulge, Still Under Pressure When Opened, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated, Short on Upper Corner Near Neg Tab.
76	15%	1.5	40°	455	3	9348	Shorted During Cycling, High Pressure Bulge, Still Under Pressure When Opened, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated, Short on Upper Corner Near Neg Tab.

Pack Number	Depth of Discharge	Orbit Period (Hours)	Test Temperature	Cell Number	Position in Pack	Cycles Completed	Cell Type: Gulton 20 Ampere-Hour Failure Analysis Nickel-Cadmium
87	40%	1.5	25°	468	1	163	Low Volt Disch, High Volt Chg, High Pres Bulge, Lost 8 gm.
				388	2	208	Low Volt Disch, High Volt Chg, Lost 26.7 gm, Ceramic Short Around Pos Terminal.
				394	3	627	Low Volt Disch, High Volt Chg, Lost 16.4 gm, High Pres Bulge, Deposit on Both Terminals, Ceramic Short Neg to Case.
				454	4	627	Low Volt Disch, Low Volt Chg, Lost 21.6 gm, Deposit on Both Terminals, Sides Concave, Hit Bus on Both Sides.
				386	5	627	Low Volt Disch, Low Volt Chg, Lost 18.1 gm, High Pres Bulge, Burnt Separator 5th or 6th Neg Plate Near Top, Ceramic Short.
88	40%	3.0	25°	422	2	151	Low Volt Disch, High Volt Chg, High Pres Bulge, Bottom Ceramic Leak, Lost 25 gm.
				404	1	151	Low Volt Disch, High Volt Chg, High Pres Bulge, Bottom Ceramic Leak, Lost 25 gm.
				466	3	358	Low Volt Disch, High Volt Chg, High Pres Bulge, Lost 16.4 gm.
				429	5	358	Low Volt Disch, Low Volt Chg, Ceramic Short Around Pos Terminal.
				452	4	2824	Low Volt Disch, Low Volt Chg, Short Through Separator at Top of Plates, High Pres Bulge on Sides, High Pres, Separator Deteriorated.
90	25%	1.5	40°	457	5	2824	Low Volt Disch, Normal Volt Chg, Short Through Separator, Blistering on Pos Plate, High Pres Bulge on Sides, High Pres.
				378	3	4045	Normal Volt Disch, Went Dead on Chg During Cap Check, Ceramic Short, Separator Completely Deteriorated.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: <u>Gulton 20 Ampere-Hour</u> FAILURE ANALYSIS
91	25%	3.0	40°	395	4	2862	Shorted Out Following Capacity Check, Leaked, Lost 6.8 gm, Deposit on Both Terminals, Both Ceramic Seals Broken, Separator Completely Deteriorated, Neg Plate Material Migration, Separator Very Wet, Plastic Wrap Burned, Ceramic Short.
			40°	412	3	3385	Shorted on Cycling, High Pressure Bulge, Pos and Neg Plate Material on Separator, Separator Completely Deteriorated.
			40°	489	1	4480	Shorted During Cycling, Deposit on Both Terminals, Still Under Pressure When Opened, Concave Sides, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated.
			40°	447	2	4480	Shorted During Cycling, Deposit on Neg Terminal, High Pressure Bulge, Concave Sides, Hot Spots Around Pinpoint Penetration, Blistering on Pos Plates, Separator Completely Deteriorated.
101	15%	1.5	0°	435	2	3111	Low Volt Disch, High Volt Chg, Leaked, Lost 24.6 gm, High Pres Bulge, Separator Very Dry.
			0°	407	5	3111	Low Volt Disch, High Volt Chg, Leaked, Lost 20.4 gm, Separator Very Dry.
			0°	438	4	3629	Low Volt Disch, High Volt Chg, Leaked, Lost 13.2 gm, High Pres Bulge, Sides Concave, Blistering on Pos Plates.
115	25%	1.5	0°	490	3	2107	Low Volt Disch, Normal Volt Chg, Walls Concave, Busses Shorted to Case, Lost 26.9 gm.
			0°	508	2	2203	High Pres Bulge, Blisters on Pos Plate, Busses Shorted to Case.
			0°	467	4	2291	Black Deposit on Outside on Neg Terminal, High Pres Bulge, Busses Shorted to Case, Blisters on Pos Plate, Burnt Spot on Separator.

PACK NUMBER	DEPTH OF DISCHARGE	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gould 20 Ampere-Hour
							FAILURE ANALYSIS Nickel-Cadmium
104	25%	1.5	25°	69	1	2672	Low Volt Disch, Low Volt Chg, Shorted at Bottom on Pos Plate, Pos Grid Wire Penetrated Separator, Short at Top Between Pos Grid and Neg Tab, High Pressure.
							Low Volt Disch, Low Volt Chg, Short Between Plates, Grid Wire Penetrated Separator, Pos Plate Material Between Plates, High Pressure.
							Low Volt Disch, Low Volt Chg, Separator Completely Deteriorated, Short Between Plates, High Pressure.
112	15%	1.5	40°	17	1	5005	Low Volt Disch, Low Volt Chg, Short Between Plates, Short About One Inch From Bottom of Plates, Separator Completely Deteriorated, High Pressure.
							Low Volt Disch, Low Volt Chg, Shorted Through Separator, Shorted on Bottom Corner of Plates, Separator Completely Deteriorated, High Pressure.
							Low Volt Disch, Low Volt Chg, Short at Top Corner of Plate Where Pos Tabs are Connected to Plates, Separator Deteriorated Allowing Plates to Come Together, Blistering on Pos Plates.
118	40%	1.5	25°	61	2	1747	Low Volt Disch, Low Volt Chg, Short at Bottom of Pos Plate, Grid Wires Penetrated Separator Where Tape Holds Plates Together, High Pressure.
							Low Volt Disch, Low Volt Chg, Shorted at Bottom Corner of Pos Plates, Grid Wires Through Separator, Rough Grid Showing Through at Top and Bottom of Most Plates, High Pressure.
							Low Volt Disch, Low Volt Chg, Short Through Separator on Side of Plates, Pos Plate Material Penetrated Separator, High Pressure.

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	PRECONDITIONING		CAPACITY CHECKS AFTER 88-DAY INTERVALS								CYCLES TO PACK FAILURE
					INITIAL	*	FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	
G.E. 3 A.H.	63	1.5	15	0	3.48		3.18	3.12	3.05	3.03	3.05	2.90	3.30	3.50	
	64		25	0	3.50		3.33	3.70	3.38	3.35	3.42	3.27	3.72		
	15		25	25	4.00		3.38	2.93	2.33	1.95	1.47	1.15	1.10		
	16		40	25	4.08		2.75	2.10	1.35						5013
	39		15	50/40	1.65	2.43 (779)	2.10	1.53	1.25	1.17	0.70				8109
	40		25	50/40	1.80	2.50 (1440)	0.88*	0.88							2509
G.E. 3 A.H.	67	3	15	0	3.63		3.25	3.40	3.53	2.97	3.25	2.95			
	68		25	0	3.50		3.35	3.53	3.40	3.27	3.25	2.93	2.87		
	19		25	25	3.93		3.78	3.48	3.15	3.00	2.78	2.48	2.29	2.20	
	20		40	25	3.78		3.00	2.35	2.07	1.83	2.00	1.62	1.47	1.20	
	43		15	50/40	1.77	2.63 (320)	2.20	1.61	1.65						2656
	44		25	50/40	1.60	2.00 (327)	1.35	1.19	1.15	1.10	0.95	0.88			
Gould 3.5 A.H.	51	1.5	15	0	3.62		4.00	3.33	3.41	3.21	3.35	3.15	3.47	3.00	
	52		25	0	3.33		3.85	3.53	3.18	3.30	3.24	2.80	2.65		
	3		25	25	4.00		3.82	2.92	2.25						4751
	4		40	25	3.94		3.38	2.77							3164
	27		15	50/40	1.53	2.63 (779)	2.07	1.95	1.90						4485
	28		25	50/40	1.55	2.07 (424)	2.86								1811
Gould 3.5 A.H.	55	3	15	0	3.27		3.59	3.15	3.38	3.33	3.27	3.03	2.77		
	56		25	0	3.50		3.91	3.53	3.65	3.41	3.38	3.30	3.27		
	7		25	25	4.32		4.03	3.79	3.53	2.77	2.28	2.51			2494
	8		40	25	4.29		3.65	3.25	3.03						2524
	31		15	50/40	1.60	1.31 (318)	1.75	1.98	2.16						975
	32		25	50/40	1.55	1.44 (495)	1.49								

\* Preconditioning at change to 40° C. Number of cycles completed at 50° C is in parentheses.

\*\* Still at 50° C.

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	PRECONDITIONING		CAPACITY CHECKS AFTER 88-DAY INTERVALS								CYCLES TO PACK FAILURE
					INITIAL	*	FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	
Sonotone 5 A.H.	49	1.5	15	0	5.45		5.54	5.50	4.96	4.79	4.71	4.50	4.54		
	50		25	0	5.04		4.96	4.58	4.25	3.79	3.67	3.67	3.46		
	1		25	25	5.42		3.67	2.33	2.88	2.79	2.21	2.58	2.80	2.46	
	2		40	25	6.42		4.38	4.17	3.25	3.00					6671
	25		15	50/40	3.08	3.63 (703)	2.25	1.83	2.04	1.17	1.17	1.54	0.83		
	26		25	50/40	3.17	3.17 (445)	2.75	2.93							3625
Sonotone 5 A.H.	53	3	15	0	5.67		5.79	5.67	5.42	5.33	5.50	5.54	5.00		
	54		25	0	4.91		3.96	3.96	4.13	3.96	3.75	3.29	3.38		
	5		25	25	5.71		4.58	3.04	2.04	2.13	2.13	2.08	2.21		
	6		40	25	5.83		4.50	3.29	3.25	2.92	2.33	2.33	2.00	2.13	
	29		15	50/40	3.33	4.92 (223)	2.75	2.38	2.42	2.08	1.96	1.29	1.79		
	30		25	50/40	3.75	3.50 (183)	1.88	2.88	2.38	1.67	1.21				4141
Gulton 6 A.H.	61	1.5	15	0	5.00		5.10	5.40	4.45	3.15	2.60	2.16	1.75		
	62		25	0	5.00		4.75	3.80	4.35	3.55	3.30	3.30	3.95		
	13		25	25	5.80		2.75	2.85	2.70						4021
	14		40	25	6.40		3.45								2086
	37		15	50/40	2.75	3.60 (239)	1.70	2.95	1.85	2.00					6064
	38		25	50/40	2.65	2.90 (114)	1.55								1377
Gulton 6 A.H.	65	3	15	0	4.50		5.45	5.35	5.15	4.50	4.50	5.15	4.20		
	66		25	0	4.25		5.00	3.50	2.50	3.80	3.90	3.45			4414
	17		25	25	5.80		3.65	3.45	2.50	2.30					2825
	18		40	25	4.55		4.95	3.16							1550
	41		15	50/40	2.75	4.55 (239)	2.05	1.63							1689
	42		25	50/40	2.60	3.80 (96)	2.15	2.10	2.35	1.85	1.50	1.30			4133

\* Preconditioning at change to 40° C. Number of cycles completed at 50° C is in parentheses.



# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	PRECONDITIONING		CAPACITY CHECKS AFTER 88-DAY INTERVALS								CYCLES TO PACK FAILURE
					INITIAL	*	FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	
G.E. 12 A.H.	110	1.5	15	0	13.9		12.7	10.4	13.0	12.5	14.1	13.7	14.3		
	124		25	0	14.2		13.5	12.9	12.8	11.4	11.5	11.7	10.8		
	82		25	25	15.2		8.00	5.55	5.50	5.40	5.70	5.00	4.70		
	96		40	25	14.8		6.00	7.65							4020
	85		15	50/40	6.80	8.20 (334)	5.00	4.70	5.00	4.90	5.00	1.90	4.30		
	99		25	50/40	6.90	6.00 (195)	4.90	5.20	4.40						4853
G.E. 12 A.H.	111	3	15	0	14.2		13.2	10.7	11.0	12.1	12.9	12.0	11.4		
	125		25	0	14.6		13.0	12.1	11.9	12.2	12.9	11.7	11.2		
	83		25	25	15.2		11.7	8.20	6.13	5.20	4.80	4.40	5.10		
	97		40	25	14.9		5.60	5.86	7.90	8.20	6.80	5.50	5.70		
	86		15	50/40	7.10	8.20 (205)	6.30	3.70	4.00	3.50	2.90	2.30	4.40		
	100		25	50/40	7.00	9.80 (70)	3.80	4.70	5.70	5.10	4.00	4.00			
Gould 20 A.H.	84	1.5	15	0	22.5		27.7	26.5	24.2	24.7	21.7	22.3	14.8		
	98		25	0	23.1		21.2	15.2	18.7	17.2	17.5	13.5	13.5		2980
	104		25	25	25.0		18.5	14.0							2937
	118		40	25	24.7		23.3								5213
	112		15	50/40	9.67	6.83 (183)	15.7	15.3	12.5	12.4					1574
	126		25	50/40	9.00	13.9 (1326)	15.2								
Gould 20 A.H.	80	3	15	0	23.0		23.2	21.5	20.3	25.8	19.7	18.3	16.7		
	94		25	0	23.0		17.5	25.0	18.2	18.8	16.8	17.0	15.8		
	105		25	25	23.3		23.5	22.2	21.3	21.2	20.7	10.5	20.5		
	119		40	25	24.8		24.7	21.7							1793
	108		15	50/40	9.50	9.67 (47)	11.8	14.8	16.8	15.2	12.3				
	122		25	50/40	9.33	7.50 (756)	8.17								983

\* Preconditioning at change to 40° C. Number of cycles completed at 50° C is in parentheses.

\*\* Still at 50° C.

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	PRECONDITIONING		CAPACITY CHECKS AFTER 88-DAY INTERVALS								CYCLES TO PACK FAILURE
					INITIAL	*	FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	
Gulton 20 A.H.	101	1.5	15	0	17.2		12.5	5.67							3631
	115		25	0	17.7		11.2								2288
	73		25	25	23.3		7.17	9.50	7.83	8.67	8.83				7763
	87		40	25	23.3										627
	76		15	50/40	10.3	13.8 (172)	6.50	4.83	5.50	4.67	5.00	5.17			
	90		25	50/40	9.00	11.3 (65)	6.00	10.3	7.33*						4045
Gulton 20 A.H.	102	3	15	0	16.7		12.8	25.2	20.3	19.5	17.3	17.0	15.0		
	116		25	0	21.7		20.7	21.8	19.3	17.5	15.2	15.8	13.5		
	74		25	25	20.3		6.17	7.17							1754
	88		40	25	19.8										358
	77		15	50/40	9.50	12.7 (71)	7.33	5.33	4.83	5.33	4.67	5.00	5.17		
	91		25	50/40	9.17	10.3 (47)	6.67	6.67	7.67	6.83	7.17	5.50			
Yardney 12 A.H.	57	24	50	0	13.8		8.60								166
	33		50	40	13.5		12.0								210
Gulton 6 A.H.	79	24	50	25	6.60		3.55	4.40	4.25	4.05	3.50				
G.E. 12 A.H.	93	24	50	40 ***	13.0		7.60	6.50	5.00						349
									(40°C)	(40°C)					
Gulton 50 A.H.	95	1.5	25	0	54.6		59.6	45.4							3127
	123		15	40	27.9										

\* Preconditioning at change to 40° C. Number of cycles completed at 50° C is in parentheses.

\*\* Two cells only; pack failed during capacity check.

\*\*\* Changed from 25° to 40° C ambient after 173 cycles.

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	INITIAL PRECONDI- TIONING	CAPACITY CHECKS AFTER 88-DAY INTERVALS										CYCLES TO PACK FAILURE		
					FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	NINTH 88 DAYS	TENTH 88 DAYS			
Sonotone (Triple Sealed) 3 A.H.	1.5	15	0	3.23	3.55	3.47	3.50										
		25	0	2.88	3.05	2.78	2.72										
		25	25	3.35	1.40	1.17											
		40	25	3.60	1.32												
		15	40	3.53													
		25	40	3.48	1.05												
Sonotone (Stabis- tor) 5 A.H.	1.5	25	-20	4.92													
		40	-20	4.96													
		25	0	3.38	2.92												
		40	0	4.13	2.42												
		25	25	5.33	2.33												
		40	25	5.50	3.66												
		25	40	4.21	1.88												
		40/15	40	3.71	1.04												

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	INITIAL PRECONDI- TIONING	CAPACITY CHECKS AFTER 88-DAY INTERVALS										CYCLES TO PACK FAILURE
						FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	NINTH 88 DAYS	TENTH 88 DAYS	
Gulton (Comm.) 4 A.H.	315	1.5	15	0	5.04	3.57	4.03	4.00	3.80	4.07						
	326		25	0	4.87	4.00	3.87	3.73								
	204		25	25	4.63	2.47	2.07	1.83	1.80	3.67	1.83					
	214		40	25	5.00	2.00	2.07	1.87	1.93	1.93						
	228		15	40	4.20	1.77	1.67	1.47	1.53	1.93						
	240		25	40	3.37	1.17	1.13	1.30	1.03	1.30						
Gulton 12 A.H.	216	1.5	15	0	14.0	14.0	14.1	14.2								
	301		25	0	14.2	14.5	14.4	14.2								
	227		25	25	14.1	5.90	3.50	4.10								
	296		40	25	13.3	4.70	5.40	5.00								
	78		15	40	6.80	4.30	3.10	3.30								
	290		25	40	11.4	5.40	3.60	3.70								
Gulton (HSI) 6 A.H.	213	1.5	25	0	7.30	7.30	7.25	7.20								
	218		40	25	6.90	3.00	3.60	3.80								
	238		25	40	5.00	1.75	2.00	1.75								
Yardney (AgZn)	9	24	42	25	14.0											57

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	INITIAL PRECONDI- TIONING	CAPACITY CHECKS AFTER 88-DAY INTERVALS										CYCLES TO PACK FAILURE	
					FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	NINTH 88 DAYS	TENTH 88 DAYS		
Gulton (Nimbus) 5 A.H.	1.5	15	0	5.00	5.17	5.46										
		25	0	5.38	5.38	5.33										
		15	25	5.25	5.40	4.17										
		25	25	5.46	2.55	1.67										
		15	40	3.29	1.67	1.50										
		25	40	3.04	1.42	1.54										
Gulton 6 A.H. (Third elec- trode)	1.5	25	0	7.15	7.00	6.20										
		40	0	7.25	7.50	1.00										
		40	25	7.10	3.15	6.20	4.35									
		25	25	5.95	3.85	5.20	4.00									
		15	40	2.95	2.25	1.60										
		25	40	3.95	2.10	2.05										
G.E. (Nimbus) 5 A.H.	1.5	15	0	5.42	5.08	5.38										
		25	0	5.21	5.50	5.46										
		15	25	4.67	4.13	4.13	3.50									
		25	25	5.58	3.58	2.54										
		15	40	3.67	2.42	2.25	1.80									
		25	40	3.83	2.25	1.77										
G.E. 12 A.H. (Third elec- trode)	1.5	25	0	15.0												
		25	25	10.2												
		40	25	9.10												
		25/40	40/0	5.30*												
				15.2												

\* At 40° C.

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	INITIAL PRECONDI- TIONING	CAPACITY CHECKS AFTER 88-DAY INTERVALS										CYCLES TO PACK FAILURE
						FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	NINTH 88 DAYS	TENTH 88 DAYS	
Gulton	244	1.5	25	-20												
(Neoprene	200		25	0												
seal	276		25	25	5.60											
folded)	242		25	40	4.39											
5.6 A.H.																
Gulton	232	1.5	25	-20												
(Neoprene	390		25	0												
seal non-	396		25	25	6.30											
folded)	230		25	40	4.90											
5.6 A.H.																
Yardney	257	24	20	0	3.67	1.83										
(C-3	21		20	25	4.93	.76										
Separator)	45		20	40	6.02											
5 A.H.																
Yardney	409		20	25	5.25											
(Radiated	233		20	25	5.20											
Separator)																
5 A.H.																
Yardney	69		20	25	5.38											
(Pellon																
Control																
Separator)																
5 A.H.																

# AMPERE-HOUR CAPACITIES ON PRECONDITIONING AND CAPACITY CHECK CYCLES

TYPE	PACK NUMBER	ORBIT PERIOD (Hours)	DEPTH OF DISCHARGE	TEMPERATURE °C	CAPACITY CHECKS AFTER 88-DAY INTERVALS										CYCLES TO PACK FAILURE						
					INITIAL PRECONDI- TIONING	FIRST 88 DAYS	SECOND 88 DAYS	THIRD 88 DAYS	FOURTH 88 DAYS	FIFTH 88 DAYS	SIXTH 88 DAYS	SEVENTH 88 DAYS	EIGHTH 88 DAYS	NINTH 88 DAYS		TENTH 88 DAYS					
Delco. (Silver- Zinc) 25 A.H.	609	24	40	25	29.7																
Gulton (Neoprene seal folded) 3.6 A.H.	239	1.5	40	25	3.06																
Yardney (Silver- Cadmium) 12 A.H.	185	1.5	25	-20																	
			25	0																	
			25	25																	
																</					

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS.)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		DIFFERENCE	CELLS FAILING IN PACK.		
				DISCHARGE	CHARGE				INITIAL	FINAL		INITIAL	FINAL	
G.E. <div>(pages 72-76)</div>	3	63	0	0.5	1.0	15	115	1.55	12441	12889	448	10	10	
		64	0	"	"	25	"	"	12415	12863	448	10	10	
		15	25	"	"	25	125	1.49		FAILED				
		16	25	"	"	40	"	"		FAILED				
		39	40	"	"	15	160	1.45		FAILED				
		40	40	"	"	25	"	1.41		FAILED				
		67	0	"	2.5	15	115	1.55	5945	6231	236	10	10	
		62	0	"	"	25	"	"	6080	6339	258	10	10	
		19	25	"	"	25	125	1.49		6055	6313	258	10	10
		20	25	"	"	40	"	"		FAILED				
Gould <div>(pages 77-80)</div>	3.5	43	40	"	"	15	160	1.45		FAILED				
		44	40	"	"	25	"	"		FAILED				
		51	0	"	1.0	15	115	1.55	12459	12906	448	10	10	
		52	0	"	"	25	"	"	12124	12572	448	5	5	
		3	25	"	"	25	125	1.49		FAILED				
		4	25	"	"	40	"	"		FAILED				
		27	40	"	"	15	160	1.45		FAILED				
		28	40	"	"	25	"	"		FAILED				
		55	0	"	2.5	15	115	1.55	6073	6331	258	10	10	
		56	0	"	"	25	"	"	6046	6254	208	10	10	
		7	25	"	"	25	125	1.49		FAILED				
		8	25	"	"	40	"	"		FAILED				
		31	40	"	"	15	160	1.45		FAILED				
		32	40	"	"	25	"	1.41		FAILED				



MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED			CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	DIFFERENCE	INITIAL	FINAL
SONOTONE (pages 81-86)	5	49	0	0.5	1.0	15	115	1.55	12053	12500	447	8	8
		50	0	"	"	25	"	"	12070	12491	421	10	9
		1	25	"	"	25	125	1.49		FAILED			
		2	25	"	"	40	"	"		FAILED			
		25	40	"	"	15	160	1.45		FAILED			
		26	40	"	"	25	"	"		FAILED			
		53	0	"	2.5	15	115	1.55	5939	6197	256	10	10
		54	0	"	"	25	"	"	5920	6128	208	10	10
		5	25	"	"	25	125	1.49	5783	6041	258	8	8
		6	25	"	"	40	"	"		FAILED			
GULTON (pages 87-88)	6	29	40	"	"	15	160	1.45	5605	5785	180	6	5
		30	40	"	"	25	"	"		FAILED			
		61	0	"	1.0	15	115	1.55		FAILED			
		62	0	"	"	25	"	"	11743	12190	447	6	6
		13	25	"	"	25	125	1.49		FAILED			
		14	25	"	"	40	"	"		FAILED			
		37	40	"	"	15	160	1.45		FAILED			
		38	40	"	"	25	"	"		FAILED			
		65	0	"	2.5	15	115	1.55	5852	6110	258	8	8
		66	0	"	"	25	"	"		FAILED			
		17	25	"	"	25	125	1.49		FAILED			
		18	25	"	"	40	"	"		FAILED			
		41	40	"	"	15	160	1.45		FAILED			
		42	40	"	"	25	"	"		FAILED			

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	INITIAL	FINAL
G.E. (pages 89-94)	12	110	0	0.5	1.0	15	115	1.55	11835	12282	447	5
		124	0	"	"	25	"	"	11602	12049	447	5
		82	25	"	"	25	125	1.49		FAILED		
		96	25	"	"	40	"	"		FAILED		
		85	40	"	"	15	160	1.45		FAILED		
		99	40	"	"	25	"	"		FAILED		
		111	0	"	2.5	15	115	1.55	5899	6107	208	5
		125	0	"	"	25	"	"	5892	6100	208	5
		83	25	"	"	25	125	1.49	5905	6113	208	5
		97	25	"	"	40	"	"		FAILED		
		86	40	"	"	15	160	1.45	5710	5918	208	5
		100	40	"	"	25	"	"		FAILED		
GOULD (pages 95-98)	20	84	0	"	1.0	15	115	1.55	11783	12230	447	5
		98	0	"	"	25	"	"		FAILED		
		104	25	"	"	25	125	1.49		FAILED		
		118	25	"	"	40	"	"		FAILED		
		112	40	"	"	15	160	1.45		FAILED		
		126	40	"	"	25	"	1.41		FAILED		
		80	0	"	2.5	15	115	1.55	5869	6103	234	5
		94	0	"	"	25	"	"	5729	5997	258	5
		105	25	"	"	25	125	1.49	5582	5751	169	3
		119	25	"	"	40	"	"		FAILED		
		108	40	"	"	15	160	1.45		FAILED		
		122	40	"	"	25	"	1.41		FAILED		

MFR.	CAPACITY A. H.	PACK NO.	TEMP °C.	ORBIT PERIOD (HRS)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	INITIAL	FINAL
GULTON (Pages 99-101)	20	101	0	0.5	1.0	15	115	1.55		FAILED		
		115	0	"	"	25	"	"		FAILED		
		73	25	"	"	25	125	1.49		FAILED		
		87	25	"	"	40	"	"		FAILED		
		76	40	"	"	15	160	1.45		FAILED		
		90	40	"	"	25	"	"		FAILED		
		102	0	"	2.5	15	115	1.55	5697	5931	4	4
		116	0	"	"	25	"	"	5517	5775	5	5
		74	25	"	"	25	125	1.49		FAILED		
		88	25	"	"	40	"	"		FAILED		
G.E. NIMBUS (Pages 102-107)	5	77	40	"	"	15	160	1.45	5645	5819	4	3
		91	40	"	"	25	"	"		FAILED		
		103	0	"	1.0	15	110	1.49	4729	5176	5	5
		107	0	"	"	25	"	"	4082	4530	5	5
		106	25	"	"	15	120	"	4749	5197	5	5
		304	25	"	"	25	"	"	4052	4500	5	5
		113	40	"	"	15	130	"	4751	4989	5	5
		114	40	"	"	25	"	"	4021	4469	5	5
		117	0	"	"	15	110	"	4506	4970	5	5
		121	0	"	"	25	"	"	4084	4532	5	5
GULTON NIMBUS (Pages 108-113)	5	120	25	"	"	15	120	"	4673	5072	5	5
		318	25	"	"	25	"	"	4052	4451	5	5
		127	40	"	"	15	130	"	4672	5117	5	5
		128	40	"	"	25	"	"	3966	4394	4	4

MFR.	CAPACITY A. H.	PACK No.	TEMP. °C.	ORBIT		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		DIFFERENCE	CELLS REMAIN- ING IN PACK	
				DISCHARGE	PERIOD (HRS) CHARGE				INITIAL	FINAL		INITIAL	FINAL
GULTON  (pages 114-119)	6 (THIRD ELECTRODE)	59	0	0.5	1.0	25	—	—	4551	5010	459	4	4
		71	0	"	"	40	—	—	4534	5069	535	4	4
		11	25	"	"	40	—	—	5681	6191	510	4	4
		23	25	"	"	25	—	—	5665	6174	519	5	5
		35	40	"	"	15	—	—	3586	4171	585	5	5
		47	40	"	"	25	—	—	4331	4841	510	5	5
		60	0	"	"	25	—	—	2181	2692	511	5	5
G.E.  (pages 120-121)	12 (THIRD ELECTRODE)	72	0	"	"	40	—	—	DISCONTINUED				
		12	25	"	"	25	—	—	DISCONTINUED				
		24	25	"	"	40	—	—	DISCONTINUED				
		36	40	"	"	15	—	—	DISCONTINUED				
		48	40	"	"	25	—	—	1522	2030	508	5	5
		175	-20	"	"	25	—	—	1818	2089	271	3	3
		289	-20	"	"	40	—	—	FAILED				
SONOTONE  (pages 122-127)	5 (STABILISOR)	92	0	"	"	25	—	—	2671	3071	400	5	4
		322	0	"	"	40	—	—	2463	2852	389	4	4
		273	25	"	"	25	—	—	3001	3440	439	3	3
		287	25	"	"	40	—	—	FAILED				
		299	40	"	"	25	—	—	2722	3170	448	5	5
		312	40	"	"	40	—	—	2815	3262	447	4	4
		174	-20	"	"	25	—	—	0	90	90	5	5
Gulton 128- 131	1.25	388	-20	"	"	60 <sup>AD</sup> 40	—	—	0	37	37	5	5
		199	0	"	"	60	—	—	0	381	381	5	5
		308	0	"	"	25	—	—	0	381	381	5	5

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	INITIAL	FINAL
GULTON (pages 136-138)	4	315	0	0.5	1.0	15	115	1.55	8539	8986	447	5
		326	0	"	"	25	"	"	9010	9457	447	5
		204	25	"	"	25	125	1.49	8811	9259	448	5
		214	25	"	"	40	"	"	8370	8474	104	4
		228	40	"	"	15	160	1.45	8704	9152	448	5
		240	40	"	"	25	"	"	8738	9186	448	4
		216	0	"	"	15	115	1.55	5747	6195	448	5
		301	0	"	"	25	115	1.55	6611	7058	447	4
GULTON (pages 138-141)	12	227	25	"	"	25	125	1.49	6004	6452	448	5
		296	25	"	"	40	125	1.49		FAILED		
		78	40	"	"	15	160	1.45	6564	7013	449	4
		290	40	"	"	25	160	1.45		FAILED		
		213	0	"	"	25	115	1.55	5714	6161	447	5
		218	25	"	"	40	125	1.49	5584	6014	430	4
		238	40	"	"	25	160	1.45	5216	5733	447	3
		243	0	"	"	15	115	1.55	3607	4046	439	5
SONOTONE (pages 145-152)	3 (TRIPLE SEALED)	231	0	"	"	25	115	"	3607	4046	439	5
		203	25	"	"	25	125	1.49	3766	4214	448	5
		202	25	"	"	40	125	"	3447	3894	447	4
		226	40	"	"	15	160	1.45	3595	3993	398	5
		237	40	"	"	25	160	"	3565	4012	447	5

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS.)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	INITIAL	FINAL
YARDNEY (Pages 151- 153)	5.0	257	0	1.0	23.0	20	(30A)	1.50	158	190	32	5
		409	25	"	"	"	"	"		FAILED		
		21	25	"	"	"	"	"		FAILED		
		69	25	"	"	"	"	"	115	147	32	5
		45	40	"	"	"	"	"		FAILED		
		233	25	"	"	"	"	"	115	147	32	5
GULTON 154-161	5.6	232	-20	0.5	1.0	25	115	1.55	860	1304	444	5
		244	-20	"	"	"	"	"	860	1304	444	5
		200	0	"	"	"	"	"	1137	1576	439	5
		390	0	"	"	"	"	"	1155	1602	447	5
		276	25	"	"	"	125	1.49	1268	1653	385	5
		396	25	"	"	"	"	"	1286	1718	432	5
GULTON Coulometer 162	3.6	230	40	"	"	"	160	1.45	1196	1295	79	5
		242	40	"	"	"	"	"	1375	1775	400	5
		239	25	"	"	40	(30A)	1.48	1682	1873	191	10
SONOTONE Coulometer page 163	5.0		25	0.5	1.0	30	(30A)	-	7535	8024	489	5
GULTON Sherfy page 164	3.6		25	0.5	1.0	40	60	-	2816	3310	494	9

\* DOES NOT APPLY

MFR.	CAPACITY A.H.	PACK NO.	TEMP °C.	ORBIT PERIOD (HRS)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED			CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	DIFFERENCE	INITIAL	FINAL
YARDNEY 165-167	12.0	185	-20	0.5	1.0	25	130	1.60	93	214	121	5	5
		197	0	"	"	"	"	1.58	78	106	28	5	5
		182	25	"	"	"	"	1.55	661	1108	447	5	5
DELCO Page 168	20.0	609	25	1.0	23.0	40	*	1.97	73	104	31	10	10

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		PERCENT DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK	
				DISCHARGE	CHARGE				INITIAL	FINAL	INITIAL	FINAL
YARDNEY	12	57	0	1.0	23.0	50	*	1.50		FAILED		
		33	40	"	"	"	*	1.50		FAILED		
		79	25	1.0	23.0	50	200	1.49		FAILED		
GULTON (page )	6											
G.E. (page )	12	93	25*	1.0	23.0	50	*** 200	** 1.49		FAILED		
		95	0	0.5	1.0	25	115	1.55		FAILED		
		123	40	"	"	15	160	1.45		FAILED		
DELCO (pages )	25  (NaOH) →	75	25	1.0	23.0	40	*	1.97		FAILED		
		89	25	"	"	"	*	"		FAILED		
		288	25	0.5	2.5	"	*	"		DISCONTINUED		
		188	25	"	"	"	*	"		FAILED		
DELCO (pages )	40	275	25	1.0	23.0	25	*	1.97		DISCONTINUED		
YARDNEY	12 AgZn, low- speed charge	9	25	1.0	23.0	42 (5 amfs)	* (500 Mo.)	1.97		FAILED		

\* DOES NOT APPLY  
 \*\* CHARGE : TO 40°C, 1.45 V/CELL LIMIT AFTER CYCLE 173.



PACK NO. 63 G.E. 3 A.H.		DEPTH OF DISCHARGE 15 PERCENT OF RECHARGE 115		TEST TEMPERATURE 0 C ORBIT PERIOD 90 MIN.									
CYCLE NO.	PACK VOLTAGE 0.90	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
12478.	12.35	.91	1.24	1.25	1.25	1.22	1.22	1.24	1.23	1.23	1.22	1.23	1.22
12503.	12.33	.91	1.24	1.24	1.25	1.22	1.22	1.24	1.22	1.23	1.22	1.23	1.22
12580.	12.31	.91	1.23	1.25	1.24	1.21	1.24	1.22	1.23	1.22	1.23	1.23	1.22
12610.	12.34	.90	1.23	1.25	1.25	1.22	1.22	1.24	1.23	1.22	1.24	1.24	1.23
12679.	12.34	.90	1.23	1.24	1.25	1.22	1.22	1.23	1.23	1.22	1.23	1.23	1.23
12711.	12.26	.91	1.22	1.24	1.25	1.21	1.21	1.22	1.22	1.21	1.22	1.22	1.22
12744.	12.28	.90	1.23	1.24	1.24	1.21	1.23	1.22	1.23	1.22	1.23	1.23	1.23
12793.	12.53	.90	1.26	1.26	1.26	1.24	1.24	1.25	1.24	1.25	1.25	1.25	1.25
12826.	12.50	.90	1.25	1.26	1.26	1.23	1.23	1.25	1.24	1.25	1.25	1.25	1.24
12889.	12.54	.90	1.26	1.26	1.27	1.24	1.24	1.25	1.24	1.25	1.25	1.25	1.25
12478.	15.53	.52	1.60	1.48	1.61	1.55	1.55	1.65	1.58	1.48	1.52	1.48	1.54
12503.	15.51	.23	1.59	1.48	1.61	1.55	1.55	1.64	1.58	1.48	1.52	1.47	1.55
12580.	15.51	.24	1.56	1.48	1.61	1.55	1.55	1.64	1.59	1.49	1.51	1.48	1.55
12610.	15.44	.22	1.55	1.48	1.61	1.55	1.55	1.62	1.58	1.49	1.51	1.48	1.54
12679.	15.42	.24	1.57	1.48	1.60	1.55	1.55	1.60	1.58	1.49	1.51	1.48	1.54
12711.	15.46	.23	1.55	1.48	1.61	1.55	1.55	1.60	1.59	1.48	1.52	1.47	1.55
12744.	15.43	.22	1.55	1.48	1.60	1.54	1.54	1.62	1.58	1.48	1.52	1.47	1.55
12793.	15.71	.18	1.59	1.50	1.60	1.50	1.50	1.64	1.60	1.52	1.56	1.51	1.59
12826.	15.74	.21	1.60	1.49	1.61	1.57	1.57	1.64	1.61	1.51	1.57	1.50	1.57
12889.	15.71	.21	1.62	1.49	1.62	1.57	1.57	1.65	1.62	1.50	1.55	1.49	1.57

PACK NO. 64 G.E. 3 A.H.	CYCLE NO.	PACK VOLTAGE	CURRENT	DEPTH OF DISCHARGE 25 PERCENT OF RECHARGE 115										TEST TEMPERATURE 0 C ORBIT PERIOD 90 MIN.									
				CELL VOLTAGES																			
				1	2	3	4	5	6	7	8	9	10										
12448.	12.03	1.50	1.50	1.20	1.22	1.21	1.21	1.21	1.22	1.20	1.20	1.20	1.19	END OF DISCHARGE									
12477.	12.01	1.48	1.20	1.20	1.21	1.21	1.21	1.22	1.20	1.20	1.20	1.19	1.20	1.18									
12555.	12.01	1.49	1.20	1.20	1.21	1.21	1.21	1.22	1.20	1.20	1.20	1.19	1.20	1.19									
12584.	11.99	1.49	1.20	1.20	1.21	1.21	1.21	1.21	1.20	1.20	1.20	1.19	1.19	1.18									
12653.	12.01	1.51	1.20	1.20	1.20	1.21	1.21	1.22	1.20	1.20	1.20	1.19	1.19	1.18									
12684.	11.96	1.51	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.18	1.18	1.18	1.18									
12767.	12.19	1.52	1.22	1.22	1.23	1.22	1.22	1.22	1.21	1.21	1.22	1.21	1.21	1.20									
12800.	12.13	1.52	1.22	1.22	1.22	1.22	1.22	1.22	1.21	1.21	1.21	1.20	1.21	1.20									
12863.	12.15	1.51	1.22	1.22	1.22	1.22	1.22	1.22	1.21	1.21	1.21	1.21	1.21	1.20									
12448.	15.44	.86	1.51	1.54	1.61	1.61	1.65	1.52	1.51	1.50	1.51	1.53	1.52	END OF CHARGE									
12477.	15.40	.34	1.50	1.53	1.61	1.61	1.64	1.52	1.51	1.50	1.51	1.53	1.53	1.53									
12555.	15.40	.33	1.51	1.53	1.61	1.61	1.64	1.52	1.51	1.50	1.51	1.53	1.53	1.53									
12584.	15.35	.32	1.50	1.53	1.59	1.59	1.63	1.51	1.50	1.49	1.52	1.52	1.52	1.52									
12653.	15.38	.35	1.51	1.52	1.60	1.60	1.63	1.52	1.50	1.49	1.51	1.52	1.52	1.51									
12684.	15.43	.33	1.51	1.53	1.62	1.62	1.64	1.51	1.50	1.50	1.52	1.53	1.53	1.51									
12767.	15.48	.33	1.51	1.52	1.60	1.60	1.63	1.51	1.54	1.54	1.50	1.55	1.55	1.51									
12800.	15.47	.35	1.50	1.53	1.60	1.60	1.64	1.52	1.54	1.52	1.51	1.55	1.55	1.51									
12863.	15.42	.34	1.49	1.53	1.60	1.60	1.63	1.51	1.52	1.51	1.52	1.55	1.55	1.53									

PACK NO. 67  
G.E. 3 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 0.90	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
6051.	12.43	.91	1.25	1.25	1.23	1.26	1.25	1.24	1.25	1.23	1.24	1.23	
6089.	12.38	.91	1.24	1.25	1.22	1.24	1.25	1.24	1.24	1.23	1.24	1.23	
6146.	12.37	.91	1.24	1.24	1.22	1.24	1.25	1.24	1.23	1.23	1.23	1.23	
6190.	12.34	.91	1.24	1.24	1.21	1.24	1.24	1.24	1.23	1.22	1.23	1.23	
		.21											
6051.	15.76	.09	1.61	1.50	1.52	1.60	1.57	1.62	1.56	1.58	1.57	1.60	END OF CHARGE
6089.	15.76	.09	1.60	1.49	1.48	1.59	1.63	1.61	1.57	1.57	1.56	1.60	
6146.	15.72	.11	1.59	1.48	1.49	1.59	1.64	1.62	1.55	1.59	1.52	1.60	
6190.	15.68	.10	1.58	1.47	1.49	1.57	1.62	1.61	1.54	1.59	1.52	1.60	

PACK NO. 68  
G.E. 3 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
6146.	12.01	1.50	1.19	1.20	1.20	1.22	1.21	1.20	1.21	1.20	1.17	1.20	
6202.	12.01	1.51	1.19	1.19	1.20	1.21	1.21	1.21	1.21	1.20	1.18	1.20	
6245.	11.94	1.52	1.19	1.19	1.19	1.21	1.20	1.20	1.20	1.19	1.17	1.20	
		.34											
6146.	15.76	.14	1.65	1.66	1.56	1.60	1.61	1.61	1.54	1.61	1.38	1.51	END OF CHARGE
6202.	15.80	.18	1.66	1.66	1.59	1.54	1.61	1.62	1.55	1.62	1.39	1.52	
6245.	15.89	.16	1.66	1.66	1.60	1.54	1.64	1.63	1.57	1.63	1.38	1.53	

PACK NO. 19  
G.E. 3 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
6121.	11.89	1.51	1.19	1.20	1.19	1.20	1.20	1.19	1.18	1.18	1.18	1.18	1.18
6177.	11.92	1.50	1.19	1.19	1.19	1.20	1.20	1.19	1.19	1.18	1.19	1.18	1.18
6220.	11.86	1.49	1.19	1.19	1.00	1.19	1.20	1.18	1.18	1.17	1.18	1.18	1.18
6313.	12.01	1.50	1.20	1.21	1.21	1.21	1.20	1.20	1.19	1.19	1.20	1.20	1.20
6121.	14.47	.38	1.45	1.47	1.45	1.43	1.46	1.44	1.43	1.43	1.44	1.43	END OF CHARGE
6177.	14.57	.38	1.46	1.47	1.46	1.44	1.47	1.45	1.45	1.44	1.45	1.44	
6220.	14.56	.38	1.46	1.47	1.46	1.43	1.46	1.45	1.44	1.44	1.45	1.45	
6313.	14.59	.38	1.46	1.48	1.47	1.44	1.46	1.45	1.45	1.44	1.45	1.45	

PACK NO. 51  
GOULD 3.5 A.H.

DEPTH OF DISCHARGE 15 TEST TEMPERATURE 0 C  
PERCENT OF RECHARGE 115 ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT 1.05	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
12495.	12.32	1.05	1.24	1.23	1.22	1.24	1.24	1.24	1.24	1.23	1.20	1.22	1.25
12520.	12.30	1.05	1.24	1.23	1.22	1.24	1.24	1.23	1.26	1.23	1.19	1.20	1.25
12597.	12.27	1.06	1.23	1.23	1.21	1.21	1.21	1.24	1.25	1.23	1.17	1.23	1.23
12627.	12.31	1.05	1.24	1.23	1.22	1.23	1.23	1.24	1.25	1.23	1.18	1.21	1.29
12696.	12.17	1.05	1.23	1.22	1.21	1.23	1.23	1.24	1.24	1.23	1.11	1.20	1.22
12728.	12.12	1.05	1.23	1.22	1.21	1.23	1.23	1.22	1.24	1.22	1.09	1.21	1.20
12761.	12.14	1.05	1.23	1.22	1.20	1.24	1.24	1.23	1.24	1.22	1.10	1.21	1.20
12810.	12.46	1.05	1.25	1.24	1.23	1.24	1.24	1.25	1.24	1.23	1.24	1.25	1.25
12843.	12.45	1.05	1.25	1.24	1.23	1.23	1.23	1.24	1.25	1.24	1.24	1.27	1.24
12906.	12.48	1.05	1.25	1.24	1.23	1.24	1.24	1.25	1.25	1.24	1.23	1.27	1.25
.60													
12495.	15.21	.62	1.56	1.59	1.60	1.47	1.47	1.59	1.48	1.56	1.44	1.44	1.46
12520.	15.24	.59	1.56	1.58	1.60	1.46	1.46	1.56	1.59	1.56	1.43	1.42	1.45
12597.	15.23	.62	1.55	1.58	1.58	1.44	1.44	1.57	1.59	1.55	1.42	1.45	1.45
12627.	15.38	.59	1.55	1.58	1.59	1.45	1.45	1.59	1.60	1.56	1.43	1.43	1.58
12696.	15.19	.61	1.55	1.57	1.59	1.45	1.45	1.58	1.59	1.55	1.42	1.42	1.42
12728.	15.30	.61	1.56	1.59	1.60	1.46	1.46	1.57	1.61	1.56	1.44	1.44	1.42
12761.	15.30	.60	1.56	1.59	1.60	1.46	1.46	1.58	1.60	1.57	1.44	1.44	1.41
12810.	15.49	.42	1.56	1.57	1.58	1.43	1.43	1.60	1.60	1.56	1.56	1.52	1.48
12843.	15.45	.50	1.56	1.58	1.59	1.42	1.42	1.56	1.57	1.56	1.55	1.56	1.45
12906.	15.41	.51	1.56	1.58	1.60	1.44	1.44	1.57	1.59	1.56	1.47	1.55	1.45

PACK NO. 52  
GOULD 3.5 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
12157.	5.93	1.75	1.19	1.20	.00	1.19	1.21	1.19	.00	.00	.00	.00	.00
12186.	5.92	1.73	1.18	1.20	.00	1.19	1.21	1.19	.00	.00	.00	.00	.00
12264.	5.89	1.76	1.17	1.19	.00	1.19	1.20	1.19	.00	.00	.00	.00	.00
12293.	5.91	1.76	1.20	1.18	.00	1.19	1.20	1.19	.00	.00	.00	.00	.00
12362.	5.92	1.75	1.20	1.18	.00	1.19	1.21	1.19	.00	.00	.00	.00	.00
12393.	5.93	1.74	1.18	1.21	.00	1.19	1.19	1.19	.00	.00	.00	.00	.00
12438.	5.93	1.73	1.19	1.20	.00	1.19	1.19	1.19	.00	.00	.00	.00	.00
12476.	5.94	1.77	1.20	1.18	.00	1.20	1.21	1.19	.00	.00	.00	.00	.00
12509.	5.90	1.77	1.19	1.15	.00	1.20	1.20	1.19	.00	.00	.00	.00	.00
12572.	5.95	1.76	1.19	1.19	.00	1.20	1.20	1.19	.00	.00	.00	.00	.00
12157.	7.87	.64	1.53	1.56	.00	1.62	1.59	1.60	.00	.00	.00	.00	END OF CHARGE
12186.	7.85	.65	1.51	1.58	.00	1.62	1.59	1.60	.00	.00	.00	.00	.00
12264.	7.85	.68	1.50	1.55	.00	1.63	1.60	1.61	.00	.00	.00	.00	.00
12293.	7.84	.66	1.54	1.51	.00	1.62	1.59	1.60	.00	.00	.00	.00	.00
12362.	7.82	.73	1.55	1.49	.00	1.62	1.59	1.60	.00	.00	.00	.00	.00
12393.	7.88	.64	1.50	1.60	.00	1.62	1.58	1.60	.00	.00	.00	.00	.00
12438.	7.87	.64	1.52	1.55	.00	1.62	1.59	1.60	.00	.00	.00	.00	.00
12476.	7.76	.55	1.54	1.46	.00	1.63	1.58	1.59	.00	.00	.00	.00	.00
12509.	7.74	.60	1.52	1.44	.00	1.63	1.58	1.60	.00	.00	.00	.00	.00
12572.	7.74	.58	1.51	1.46	.00	1.62	1.58	1.59	.00	.00	.00	.00	.00

PACK NO. 55  
GOULD 3.5 A.H.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE											
			1	2	3	4	5	6	7	8	9	10												
6139.	12.34	1.06	1.23	1.24	1.24	1.23	1.24	1.22	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	END OF DISCHARGE	
6195.	12.31	1.06	1.23	1.23	1.24	1.23	1.23	1.23	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	DISCHARGE
6238.	12.32	1.06	1.24	1.24	1.24	1.23	1.23	1.23	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	DISCHARGE
6331.	12.46	1.06	1.25	1.25	1.26	1.25	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	DISCHARGE
		.24																						
6139.	15.25	.23	1.52	1.55	1.52	1.53	1.54	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	END OF CHARGE
6195.	15.28	.24	1.52	1.57	1.53	1.53	1.53	1.52	1.52	1.51	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	CHARGE
6238.	15.29	.24	1.53	1.56	1.53	1.54	1.53	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	CHARGE
6331.	15.32	.24	1.53	1.55	1.54	1.55	1.54	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	CHARGE



PACK NO. 56  
GOULD 3.5 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
6074.	12.02	1.77	1.20	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20
6112.	12.01	1.77	1.20	1.21	1.20	1.21	1.21	1.19	1.19	1.19	1.19	1.20	1.20
6169.	12.05	1.76	1.20	1.20	1.21	1.21	1.21	1.20	1.20	1.19	1.19	1.20	1.20
6213.	11.96	1.79	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19	1.19
.40													
6074.	15.54	.33	1.55	1.56	1.51	1.59	1.57	1.56	1.53	1.54	1.55	1.56	END OF CHARGE
6112.	15.52	.34	1.55	1.56	1.51	1.59	1.57	1.55	1.53	1.54	1.54	1.54	1.54
6169.	15.53	.34	1.54	1.55	1.52	1.59	1.57	1.55	1.53	1.53	1.54	1.55	1.55
6213.	15.56	.32	1.55	1.56	1.50	1.60	1.56	1.56	1.52	1.54	1.55	1.56	1.56

PACK NO. 49  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT 1.50	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
12084.	9.73	1.50	1.21	1.21	.00	1.20	1.21	1.22	1.23	1.23	.00	1.22	
12114.	9.73	1.50	1.21	1.21	.00	1.20	1.22	1.22	1.23	1.23	.00	1.22	
12153.	9.69	1.51	1.20	1.21	.00	1.20	1.21	1.21	1.23	1.22	.00	1.22	
12221.	9.70	1.50	1.20	1.21	.00	1.20	1.21	1.21	1.23	1.22	.00	1.22	
12290.	9.68	1.51	1.20	1.20	.00	1.20	1.21	1.20	1.23	1.22	.00	1.22	
12322.	9.65	1.52	1.20	1.20	.00	1.19	1.19	1.21	1.22	1.22	.00	1.21	
12355.	9.62	1.50	1.19	1.19	.00	1.19	1.19	1.20	1.22	1.21	.00	1.21	
12404.	9.72	1.52	1.20	1.20	.01	1.20	1.21	1.22	1.23	1.22	.00	1.22	
12438.	9.75	1.50	1.21	1.21	.00	1.21	1.20	1.23	1.24	1.23	.00	1.22	
12500.	9.77	1.50	1.21	1.21	.01	1.21	1.21	1.23	1.24	1.23	.00	1.23	
.86													
12084.	12.44	.60	1.56	1.54	.00	1.56	1.55	1.56	1.56	1.55	.00	1.54	END OF CHARGE
12114.	12.44	.59	1.56	1.54	.00	1.56	1.55	1.55	1.56	1.55	.00	1.54	
12153.	12.36	.58	1.56	1.54	.01	1.56	1.55	1.51	1.55	1.54	.00	1.54	
12221.	12.37	.58	1.56	1.54	.00	1.56	1.54	1.52	1.55	1.54	.00	1.54	
12290.	12.34	.57	1.56	1.54	.00	1.56	1.54	1.49	1.55	1.54	.00	1.54	
12322.	12.35	.57	1.56	1.54	.00	1.56	1.53	1.53	1.55	1.54	.00	1.54	
12355.	12.34	.53	1.55	1.54	.00	1.55	1.52	1.54	1.54	1.53	.00	1.53	
12404.	12.53	.48	1.54	1.56	.00	1.55	1.52	1.65	1.56	1.55	.00	1.58	
12438.	12.52	.50	1.55	1.55	.00	1.56	1.53	1.65	1.56	1.56	.00	1.55	
12500.	12.50	.52	1.56	1.55	.01	1.55	1.53	1.64	1.56	1.55	.00	1.55	

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PACK NO. 50  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 2.50

CELL VOLTAGES

	1	2	3	4	5	6	7	8	9	10	END OF DISCHARGE
12076.	1.06	1.17	1.12	1.08	.00	1.16	1.17	1.17	1.17	1.16	
12105.	1.06	1.17	1.13	1.07	.00	1.17	1.17	1.17	1.17	1.16	
12183.	1.07	1.18	1.12	1.08	.00	1.18	1.18	1.17	1.18	1.17	
12212.	1.08	1.19	1.13	1.09	.00	1.18	1.18	1.18	1.18	1.17	
12281.	1.07	1.18	1.11	1.08	.00	1.18	1.18	1.17	1.18	1.17	
12313.	1.05	1.17	1.09	1.07	.00	1.17	1.17	1.16	1.17	1.16	
12347.	1.04	1.17	1.03	1.06	.00	1.16	1.17	1.16	1.17	1.15	
12395.	1.11	1.19	1.16	1.11	.00	1.19	1.20	1.19	1.19	1.19	
12429.	1.09	1.18	1.16	1.10	.00	1.19	1.19	1.19	1.19	1.18	
12491.	1.09	1.19	1.16	1.10	.00	1.19	1.19	1.19	1.19	1.18	

1.44

END OF  
CHARGE

12076.	1.54	1.47	1.56	1.53	.00	1.49	1.47	1.58	1.49	1.65	
12105.	1.54	1.47	1.54	1.53	.00	1.50	1.47	1.56	1.49	1.66	
12183.	1.55	1.50	1.51	1.53	.00	1.55	1.48	1.56	1.49	1.67	
12212.	1.54	1.50	1.52	1.53	.00	1.56	1.49	1.57	1.50	1.68	
12281.	1.54	1.49	1.50	1.53	.00	1.55	1.49	1.56	1.49	1.67	
12313.	1.55	1.49	1.50	1.54	.00	1.55	1.49	1.56	1.49	1.67	
12347.	1.53	1.47	1.47	1.52	.00	1.52	1.46	1.53	1.47	1.64	
12395.	1.56	1.49	1.56	1.55	.00	1.57	1.49	1.58	1.50	1.65	
12429.	1.55	1.50	1.56	1.54	.00	1.57	1.49	1.58	1.50	1.66	
12491.	1.55	1.50	1.54	1.54	.00	1.57	1.49	1.58	1.50	1.67	

PACK NO. 53  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 1.50	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
6005.	12.18	1.51	1.19	1.21	1.22	1.23	1.24	1.22	1.22	1.21	1.21	1.19	
6061.	12.19	1.50	1.20	1.21	1.23	1.23	1.24	1.23	1.23	1.21	1.22	1.19	
6104.	12.17	1.52	1.20	1.21	1.22	1.23	1.23	1.22	1.22	1.21	1.22	1.20	
6197.	12.26	1.50	1.20	1.22	1.24	1.24	1.24	1.23	1.23	1.22	1.23	1.20	
		.35											
6005.	15.88	.23	1.52	1.60	1.60	1.63	1.60	1.52	1.64	1.67	1.56	1.47	END OF CHARGE
6061.	15.63	.22	1.51	1.55	1.58	1.63	1.58	1.51	1.62	1.66	1.54	1.40	
6104.	15.88	.26	1.54	1.59	1.60	1.64	1.59	1.52	1.64	1.67	1.55	1.50	
6197.	15.80	.20	1.50	1.54	1.61	1.64	1.60	1.52	1.66	1.67	1.61	1.40	

PACK NO. 54  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
5948.	11.44	2.52	1.17	1.15	.91	1.14	1.20	1.18	1.16	1.17	1.19	1.18	
5986.	11.45	2.53	1.17	1.15	.90	1.14	1.20	1.18	1.16	1.17	1.18	1.18	
6043.	11.51	2.50	1.17	1.15	.91	1.15	1.21	1.19	1.17	1.18	1.19	1.18	
6087.	11.45	2.55	1.17	1.14	.89	1.14	1.19	1.18	1.16	1.17	1.18	1.18	
		.58											
5948.	15.46	.31	1.50	1.51	1.58	1.51	1.52	1.57	1.63	1.62	1.51	1.49	END OF CHARGE
5986.	15.65	.36	1.51	1.52	1.60	1.52	1.55	1.60	1.65	1.63	1.52	1.51	
6043.	15.57	.35	1.50	1.51	1.58	1.51	1.54	1.57	1.65	1.65	1.51	1.50	
6087.	15.59	.34	1.51	1.51	1.61	1.52	1.53	1.57	1.64	1.62	1.52	1.50	

PACK NO. 5 1 DEPTH OF DISCHARGE 25 TEST TEMPERATURE 25 C  
SONOTONE 5 A.H. PERCENT. OF RECHARGE 125 ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
5849.	9.30	2.52	1.16	.00	.00	1.17	1.18	1.16	1.17	1.16	1.16	1.15	
5905.	9.33	2.52	1.16	.00	.00	1.17	1.17	1.16	1.17	1.16	1.16	1.16	
5948.	9.29	2.51	1.15	.00	.00	1.17	1.17	1.16	1.17	1.15	1.16	1.16	
6041.	9.41	2.50	1.16	.00	.00	1.18	1.18	1.18	1.18	1.17	1.18	1.17	
.62													
5849.	11.51	.63	1.43	.00	.00	1.44	1.45	1.44	1.43	1.42	1.43	1.42	END OF CHARGE
5905.	11.55	.64	1.43	.00	.00	1.44	1.45	1.44	1.43	1.43	1.43	1.43	
5948.	11.56	.63	1.44	.00	.00	1.44	1.47	1.45	1.44	1.43	1.44	1.43	
6041.	11.53	.63	1.43	.00	.00	1.44	1.44	1.44	1.43	1.43	1.44	1.43	

PACK NO. 29  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE	15
PERCENT OF RECHARGE	160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 3 HOURS

CYCLE PACK CURRENT  
NO. VOLTAGE 1.50

CELL VOLTAGES

	5.77	1.50	.00	1.20	1.22	1.22	.00	1.00	.00	1.16	END OF
5672.											
570C.	5.53	1.51	.00	1.16	1.20	1.19	.00	.87	.00	1.15	DISCHARGE
5744.	5.53	1.53	.00	1.17	1.19	1.18	.00	.86	.00	1.14	

[illegible]

PACK NO. 62  
GULTON 6 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES										END OF DISCHARGE
			1	2	3	4	5	6	7	8	9	10	
11775.	6.94	2.98	1.19	1.17	1.16	.00	.00	1.14	.00	1.16	1.16	.00	.00
11804.	6.93	2.98	1.19	1.17	1.16	.00	.00	1.14	.00	1.16	1.16	.00	.00
11882.	6.99	3.02	1.18	1.17	1.15	.00	.00	1.13	.00	1.15	1.14	.00	.00
11911.	6.91	3.01	1.19	1.17	1.15	.00	.00	1.14	.00	1.16	1.15	.00	.00
11980.	6.88	3.01	1.18	1.16	1.15	.00	.00	1.13	.00	1.15	1.13	.00	.00
12012.	6.79	3.05	1.18	1.15	1.13	.00	.00	1.12	.00	1.14	1.10	.00	.00
12046.	6.82	3.04	1.18	1.16	1.13	.00	.00	1.12	.00	1.15	1.10	.00	.00
12094.	7.04	3.03	1.20	1.18	1.16	.00	.00	1.15	.00	1.17	1.20	.00	.00
12128.	6.95	3.04	1.19	1.16	1.14	.00	.00	1.14	.00	1.16	1.18	.00	.00
12190.	7.00	3.02	1.20	1.18	1.16	.00	.00	1.15	.00	1.17	1.18	.00	.00
11775.	9.26	.61	1.54	1.58	1.56	.00	.00	1.59	.00	1.53	1.47	.00	END OF CHARGE
11804.	9.23	.60	1.53	1.57	1.56	.00	.00	1.59	.00	1.53	1.46	.00	.00
11882.	9.29	.65	1.54	1.61	1.56	.00	.00	1.60	.00	1.54	1.46	.00	.00
11911.	9.24	.61	1.54	1.59	1.56	.00	.00	1.59	.00	1.53	1.46	.00	.00
11980.	9.21	.61	1.54	1.57	1.55	.00	.00	1.58	.00	1.53	1.46	.00	.00
12012.	9.24	.69	1.54	1.58	1.56	.00	.00	1.58	.00	1.53	1.44	.00	.00
12046.	9.26	.62	1.53	1.60	1.55	.00	.00	1.61	.00	1.53	1.44	.00	.00
12094.	9.47	.79	1.54	1.61	1.57	.00	.00	1.67	.00	1.54	1.52	.00	.00
12128.	9.27	.72	1.54	1.56	1.56	.00	.00	1.57	.00	1.54	1.50	.00	.00
12190.	9.25	.70	1.54	1.56	1.57	.00	.00	1.58	.00	1.54	1.48	.00	.00



PACK NO. 65  
GULTON 6 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE PACK CURRENT  
NO. VOLTAGE 1.80

CELL VOLTAGES  
1 2 3 4 5 6 7 8 9 10

CYCLE NO.	PACK VOLTAGE	CURRENT	1	2	3	4	5	6	7	8	9	10	END OF DISCHARGE
5918.	9.78	1.82	1.23	1.24	1.23	.00	1.26	.00	1.19	1.23	1.24	1.16	
5974.	9.20	1.81	1.21	1.21	1.21	.00	1.21	.00	1.16	.87	1.22	1.11	
6017.	9.69	1.80	1.23	1.23	1.23	.00	1.25	.00	1.19	1.16	1.24	1.14	
6110.	9.72	1.81	1.23	1.24	1.24	.00	1.24	.00	1.19	1.21	1.24	1.14	

CYCLE NO.	PACK VOLTAGE	CURRENT	1	2	3	4	5	6	7	8	9	10	END OF CHARGE
5918.	12.53	.41	1.57	1.61	1.53	.00	1.54	.00	1.64	1.48	1.51	1.60	
5974.	11.57	.35	1.46	1.46	1.48	.00	1.37	.00	1.46	1.32	1.47	1.50	
6017.	12.64	.39	1.60	1.66	1.57	.00	1.55	.00	1.66	1.37	1.53	1.66	
6110.	12.77	.40	1.64	1.66	1.59	.00	1.52	.00	1.68	1.40	1.55	1.71	

PACK NO. 110  
G.E. 12 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT 3.60	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
11866.	6.13	3.61	1.24	1.23	1.21	1.23	1.22	
11896.	6.14	3.61	1.23	1.23	1.23	1.23	1.22	
11935.	6.14	3.59	1.22	1.22	1.23	1.23	1.22	
12003.	6.12	3.59	1.23	1.23	1.24	1.24	1.24	
12072.	6.13	3.58	1.21	1.22	1.22	1.23	1.24	
12104.	6.12	3.59	1.22	1.22	1.22	1.23	1.22	
12137.	6.10	3.59	1.21	1.23	1.24	1.22	1.20	
12186.	6.18	3.60	1.24	1.22	1.24	1.22	1.24	
12220.	6.14	3.59	1.23	1.22	1.24	1.23	1.22	
12282.	6.14	3.59	1.23	1.22	1.23	1.23	1.23	
11866.	7.72	2.07	1.58	1.63	1.43	1.60	1.46	END OF CHARGE
11896.	7.77	1.62	1.56	1.63	1.48	1.60	1.47	
11935.	7.74	1.63	1.54	1.63	1.48	1.60	1.46	
12003.	7.71	1.63	1.53	1.63	1.48	1.60	1.50	
12072.	7.71	1.59	1.47	1.63	1.46	1.60	1.53	
12104.	7.70	1.58	1.53	1.62	1.46	1.59	1.48	
12137.	7.71	1.49	1.53	1.62	1.49	1.59	1.44	
12186.	7.81	1.19	1.53	1.62	1.53	1.60	1.50	
12220.	7.74	1.44	1.50	1.63	1.53	1.61	1.45	
12282.	7.71	1.46	1.48	1.64	1.49	1.61	1.49	

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PACK NO. 124  
G.E. 12 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
11633.	5.79	5.95	1.19	1.19	1.08	1.19	1.18	
11663.	5.77	6.01	1.18	1.18	1.07	1.19	1.18	
11702.	5.75	6.02	1.18	1.19	1.05	1.18	1.18	
11770.	5.73	6.00	1.18	1.18	1.03	1.18	1.16	
11839.	5.69	6.00	1.18	1.18	1.03	1.18	1.17	
11871.	5.68	6.02	1.17	1.17	1.02	1.18	1.16	
11904.	5.66	6.01	1.17	1.17	1.01	1.18	1.15	
11987.	5.85	6.00	1.20	1.20	1.09	1.21	1.19	
12049.	5.82	5.98	1.19	1.20	1.08	1.20	1.18	
11633.	7.80	3.45	1.56	1.51	1.65	1.49	1.61	END OF CHARGE
11663.	7.74	1.23	1.55	1.50	1.63	1.49	1.59	
11702.	7.94	1.16	1.59	1.53	1.68	1.50	1.66	
11770.	7.64	1.37	1.54	1.48	1.57	1.47	1.56	
11839.	7.59	1.23	1.53	1.48	1.58	1.47	1.55	
11871.	7.59	1.24	1.53	1.48	1.58	1.47	1.54	
11904.	7.58	1.26	1.53	1.48	1.58	1.47	1.53	
11987.	7.91	1.32	1.59	1.55	1.66	1.54	1.59	
12049.	7.77	1.23	1.57	1.51	1.63	1.50	1.60	

PACK NO. 111  
G.E. 12 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 3.60	CELL VOLTAGES					
			1	2	3	4	5	
5927.	6.16	3.60	1.24	1.24	1.24	1.24	1.24	END OF DISCHARGE
5965.	6.16	3.61	1.24	1.23	1.23	1.24	1.23	
6022.	6.14	3.61	1.23	1.23	1.23	1.24	1.23	
6066.	6.14	3.63	1.23	1.23	1.22	1.23	1.23	
		.83						END OF CHARGE
5927.	7.79	.44	1.60	1.56	1.56	1.52	1.58	
5965.	7.82	.42	1.61	1.55	1.55	1.51	1.58	
6022.	7.80	.41	1.61	1.55	1.54	1.51	1.58	
6066.	7.81	.38	1.61	1.54	1.54	1.50	1.59	

PACK NO. 125  
G.E. 12 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00 1

CELL VOLTAGES  
2 3 4 5

5920.	5.97	5.98	1.19	1.20	1.19	1.20	1.20	1.20	END OF DISCHARGE
5958.	5.93	6.06	1.19	1.20	1.19	1.20	1.20	1.20	
6015.	5.94	5.99	1.19	1.19	1.20	1.20	1.20	1.20	
6059.	5.92	6.02	1.19	1.19	1.19	1.20	1.19	1.19	

5920.	7.79	1.38	1.59	1.57	1.59	1.52	1.51	END OF CHARGE
5958.	7.77	.50	1.60	1.58	1.60	1.51	1.51	
6015.	7.77	.45	1.60	1.57	1.61	1.52	1.51	
6059.	7.77	.40	1.60	1.56	1.61	1.52	1.49	

PACK NO. 83  
G.E. 12 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 6.00	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
5933.	5.70	6.03	1.14	1.14	1.14	1.15	1.13	
5971.	5.65	6.04	1.13	1.14	1.14	1.14	1.13	
6028.	5.70	5.98	1.14	1.14	1.15	1.15	1.14	
6072.	5.65	5.99	1.13	1.14	1.14	1.14	1.12	
5933.	7.22	1.50	1.44	1.44	1.45	1.45	1.43	END OF CHARGE
5971.	7.19	1.52	1.45	1.44	1.45	1.45	1.43	
6028.	7.21	1.52	1.45	1.44	1.46	1.45	1.44	
6072.	7.17	1.52	1.45	1.43	1.45	1.44	1.42	

PACK NO. 86  
G.E. 12 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 3 HOURS

CYCLE PACK CURRENT

CELL VOLTAGES

NO. VOLTAGE 3.60 1

2

3

4

5

5738. 5.69 3.56 1.15 1.14 1.15 1.15 1.14 1.14  
5776. 5.70 3.66 1.16 1.14 1.14 1.14 1.14 1.13  
5833. 5.65 3.61 1.15 1.12 1.12 1.13 1.13 1.12  
5877. 5.65 3.64 1.14 1.12 1.12 1.13 1.13 1.12

END OF  
DISCHARGE

1.15

5738. 7.11 1.15 1.42 1.42 1.44 1.43 1.42 1.42  
5776. 7.11 1.16 1.42 1.42 1.43 1.42 1.42 1.41  
5833. 7.10 1.13 1.42 1.41 1.43 1.42 1.42 1.41  
5877. 7.10 1.12 1.42 1.41 1.42 1.42 1.42 1.41

END OF  
CHARGE

PACK NO. 84  
GOULD 20 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00 1

CELL VOLTAGES  
2 3 4 5

END OF  
DISCHARGE

11815.	6.02	5.91	1.23	1.23	1.22	1.23	1.15
11844.	5.99	5.98	1.23	1.22	1.22	1.22	1.14
11922.	5.99	5.99	1.22	1.23	1.22	1.22	1.14
11951.	6.11	5.98	1.23	1.24	1.23	1.23	1.21
12020.	6.12	5.96	1.23	1.23	1.22	1.23	1.25
12052.	6.09	5.98	1.22	1.22	1.22	1.22	1.24
12134.	6.00	6.00	1.20	1.21	1.19	1.20	1.23
12230.	6.15	5.95	1.24	1.24	1.24	1.24	1.23

END OF  
CHARGE

11815.	7.64	2.34	1.53	1.57	1.56	1.55	1.45
11844.	7.63	2.35	1.53	1.56	1.55	1.54	1.45
11922.	7.74	2.72	1.55	1.61	1.57	1.56	1.48
11951.	7.75	2.46	1.55	1.58	1.58	1.56	1.50
12020.	7.73	2.44	1.54	1.57	1.57	1.56	1.51
12052.	7.71	2.49	1.54	1.57	1.57	1.55	1.50
12134.	7.84	2.68	1.60	1.60	1.57	1.55	1.54
12230.	7.88	2.63	1.59	1.59	1.62	1.57	1.53

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PACK NO. 80  
GOULD 20 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00 1

CELL VOLTAGES  
2 3 4 5

5935. 6.09 6.03 1.24 1.22 1.18 1.25 1.24  
5991. 6.08 5.96 1.24 1.21 1.18 1.24 1.23  
6103. 6.16 6.05 1.26 1.23 1.20 1.26 1.25

END OF  
DISCHARGE

1.38  
5935. 7.68 1.23 1.53 1.57 1.54 1.53  
5991. 7.63 1.07 1.52 1.55 1.55 1.53 1.51  
6103. 7.80 1.19 1.53 1.58 1.60 1.57 1.56

END OF  
CHARGE

PACK NO. 94  
GOULD 20 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 10.00	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
5795.	5.95	10.03	1.22	1.20	1.16	1.20	1.19	
5851.	5.87	10.07	1.21	1.19	1.14	1.19	1.17	
5894.	5.85	10.07	1.20	1.18	1.13	1.18	1.16	
5987.	5.85	10.09	1.21	1.19	1.12	1.19	1.17	
5795.	7.70	2.30	1.52	1.52	1.56	1.56	1.51	END OF CHARGE
5851.	7.65	1.15	1.50	1.49	1.59	1.56	1.50	
5894.	7.66	1.14	1.49	1.48	1.60	1.56	1.51	
5987.	7.65	1.10	1.50	1.48	1.59	1.57	1.51	

PACK NO. 105  
GOULD 20 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 10.00	CELL VOLTAGES					
			1	2	3	4	5	
5594.	3.18	9.71	.00	1.15	.01	.88	1.16	END OF DISCHARGE
5651.	3.09	9.98	.00	1.14	.00	.82	1.14	
5751.	2.23	10.04	.00	1.14	.00	.06	1.16	
5594.	4.33	2.50	.00	1.49	.00	1.43	1.47	END OF CHARGE
5651.	4.37	2.43	.00	1.49	.00	1.44	1.45	
5751.	4.25	2.52	.00	1.48	.00	1.35	1.44	

PACK NO. 102  
GULTON 20 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					
			1	2	3	4	5	
5763.	4.83	6.00	1.21	.00	1.20	1.24	1.22	END OF DISCHARGE
5819.	4.84	5.93	1.21	.00	1.21	1.24	1.22	
5931.	4.86	6.00	1.21	.00	1.22	1.25	1.22	
		1.38						END OF CHARGE
5763.	6.16	1.19	1.55	.00	1.55	1.52	1.55	
5819.	6.15	1.21	1.55	.00	1.55	1.52	1.55	
5931.	6.27	1.37	1.60	.00	1.60	1.53	1.57	

PACK NO. 116  
SOLUTION 20 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
5583.	5.74	9.85	1.13	1.17	1.10	1.19	1.16	
5639.	5.78	9.84	1.15	1.18	1.11	1.19	1.16	
5682.	5.74	9.79	1.14	1.18	1.11	1.19	1.16	
5775.	5.73	9.95	1.14	1.17	1.10	1.18	1.15	
5583.	7.97	1.72	1.44	1.70	1.57	1.68	1.56	END OF CHARGE
5639.	7.95	2.09	1.42	1.63	1.57	1.65	1.55	
5682.	7.88	1.91	1.44	1.59	1.58	1.65	1.56	
5775.	7.82	1.62	1.45	1.62	1.56	1.62	1.55	

PACK NO. 77  
GULTON 20 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT 6.00	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
5673.	4.54	5.61	1.14	.00	1.16	1.19	1.12	
5711.	3.36	5.98	.00	.00	1.14	1.17	1.11	
5734.	3.49	6.04	.00	.00	1.11	1.20	1.18	
5778.	3.34	6.06	.00	.00	1.15	1.16	1.12	
1673.	5.81	1.92	1.47	.00	1.48	1.45	1.43	END OF CHARGE
5711.	4.35	1.78	.00	.00	1.47	1.44	1.42	
5734.	4.35	1.86	.00	.00	1.48	1.44	1.42	
5778.	4.34	1.88	.00	.00	1.47	1.45	1.42	

PACK NO. 103  
G.E. 5 A.H. NIMBUS

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 110

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
4761.	6.14	1.52	1.23	1.23	1.24	1.23	1.25
4790.	6.14	1.50	1.23	1.23	1.24	1.23	1.25
4868.	6.14	1.50	1.23	1.23	1.24	1.22	1.25
4897.	6.14	1.49	1.23	1.24	1.25	1.23	1.25
4966.	6.13	1.49	1.23	1.22	1.24	1.22	1.25
4998.	6.11	1.49	1.23	1.22	1.24	1.22	1.23
5032.	6.11	1.48	1.23	1.22	1.24	1.22	1.24
5080.	6.18	1.51	1.24	1.23	1.24	1.24	1.25
5114.	6.15	1.52	1.23	1.23	1.25	1.24	1.24
5176.	6.17	1.51	1.24	1.23	1.25	1.24	1.24

END OF  
DISCHARGE

4761.	7.43	.46	1.50	1.49	1.55	1.43	1.49
4790.	7.42	.46	1.50	1.48	1.54	1.42	1.50
4868.	7.43	.47	1.50	1.50	1.55	1.41	1.51
4897.	7.43	.46	1.50	1.49	1.55	1.41	1.50
4966.	7.41	.47	1.50	1.47	1.55	1.41	1.50
4998.	7.41	.49	1.50	1.47	1.56	1.41	1.49
5032.	7.40	.47	1.51	1.46	1.56	1.41	1.50
5080.	7.41	.43	1.51	1.46	1.54	1.43	1.50
5114.	7.43	.46	1.52	1.45	1.57	1.42	1.49
5176.	7.39	.48	1.51	1.43	1.56	1.42	1.50

END OF  
CHARGE

PACK NO. 107  
S.E. 5 A.H. NIMBUS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 110

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN

CYCLE PACK CURRENT  
NO. VOLTAGES 2.50

CELL VOLTAGES

PSIA

END OF  
DISCHARGE

	1	2	3	4	5	PSIA
4115.	1.20	1.20	1.21	1.20	1.21	73.709
4144.	1.20	1.20	1.21	1.20	1.21	68.479
4222.	1.20	1.20	1.21	1.20	1.21	60.414
4251.	1.20	1.20	1.20	1.20	1.21	56.895
4320.	1.20	1.19	1.20	1.20	1.22	51.874
4357.	1.19	1.19	1.20	1.20	1.20	48.840
4396.	1.19	1.18	1.20	1.20	1.19	45.702
4434.	1.21	1.20	1.21	1.21	1.21	41.974
4467.	1.19	1.19	1.20	1.20	1.20	39.128
4530.	1.19	1.20	1.21	1.20	1.20	35.295

END OF  
CHARGE

	1	2	3	4	5	PSIA
4115.	1.50	1.49	1.49	1.46	1.52	74.603
4144.	1.50	1.49	1.49	1.46	1.52	69.287
4222.	1.50	1.49	1.49	1.48	1.51	61.289
4251.	1.50	1.49	1.48	1.48	1.51	57.808
4320.	1.50	1.48	1.48	1.48	1.52	53.148
4357.	1.51	1.48	1.49	1.49	1.50	49.867
4396.	1.50	1.48	1.49	1.48	1.50	46.596
4434.	1.50	1.48	1.48	1.49	1.50	43.001
4467.	1.49	1.46	1.47	1.47	1.48	39.934
4530.	1.49	1.45	1.47	1.47	1.49	35.907

103



PACK NO. 106  
S.E. 5 A.H. NIMBUS

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 120

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
4781.	6.07	1.46	1.21	1.22	1.23	1.23	1.23	1.23
4811.	6.07	1.46	1.21	1.22	1.23	1.23	1.23	1.23
4888.	6.04	1.47	1.20	1.22	1.21	1.22	1.23	1.23
4918.	6.04	1.48	1.20	1.22	1.22	1.22	1.23	1.23
4987.	6.02	1.49	1.20	1.21	1.22	1.22	1.23	1.23
5019.	6.04	1.49	1.20	1.20	1.20	1.21	1.21	1.21
5052.	6.05	1.48	1.20	1.21	1.21	1.21	1.22	1.22
5101.	6.09	1.49	1.23	1.22	1.23	1.23	1.23	1.23
5134.	6.09	1.48	1.22	1.22	1.24	1.23	1.22	1.22

4781.	7.14	.90	1.43	1.44	1.43	1.44	1.44	1.44	END OF CHARGE
4811.	7.14	.90	1.43	1.43	1.42	1.44	1.44	1.44	
4888.	7.09	.90	1.42	1.43	1.41	1.43	1.43	1.43	
4918.	7.14	.89	1.43	1.44	1.42	1.44	1.44	1.44	
4987.	7.12	.90	1.42	1.43	1.42	1.43	1.44	1.44	
5019.	7.11	.90	1.42	1.43	1.41	1.43	1.42	1.42	
5052.	7.14	.90	1.42	1.43	1.41	1.43	1.43	1.43	
5101.	7.13	.90	1.43	1.43	1.42	1.44	1.43	1.43	
5134.	7.12	.90	1.43	1.43	1.43	1.43	1.42	1.42	

PACK NO. 304  
G.F. 5 A.H. NIMEUS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 120

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN

CYCLE PACK CURRENT  
NO. VOLTAGES 2.50

CELL VOLTAGES

PSIA

END OF  
DISCHARGE

4085.	5.51	2.44	1.14	1.14	1.15	.98	1.14	11.609
4114.	5.51	2.44	1.14	1.13	1.15	.99	1.15	11.620
4192.	5.48	2.44	1.14	1.13	1.15	.95	1.14	11.641
4221.	5.56	2.43	1.15	1.14	1.15	1.01	1.14	11.927
4290.	5.50	2.43	1.14	1.13	1.15	.99	1.14	11.578
4321.	5.54	2.44	1.14	1.13	1.15	1.02	1.13	11.631
4356.	5.54	2.44	1.14	1.13	1.15	1.03	1.13	11.609
4404.	5.72	2.45	1.15	1.14	1.15	1.17	1.15	13.893
4437.	5.68	2.44	1.14	1.13	1.15	1.15	1.13	13.787
4500.	5.70	2.44	1.15	1.14	1.16	1.14	1.14	12.709

END OF  
CHARGE

4085.	7.31	1.50	1.47	1.47	1.50	1.44	1.47	12.212
4114.	7.30	1.50	1.47	1.46	1.50	1.44	1.48	12.233
4192.	7.34	1.52	1.47	1.47	1.52	1.45	1.48	12.233
4221.	7.34	1.51	1.48	1.47	1.51	1.45	1.48	12.592
4290.	7.30	1.51	1.47	1.46	1.50	1.44	1.48	12.170
4321.	7.30	1.51	1.46	1.46	1.50	1.44	1.46	12.434
4366.	7.30	1.51	1.47	1.46	1.50	1.44	1.46	12.444
4404.	7.31	1.51	1.46	1.46	1.50	1.45	1.46	20.594
4437.	7.31	1.52	1.46	1.46	1.50	1.46	1.46	20.361
4500.	7.32	1.51	1.47	1.46	1.52	1.45	1.46	16.303

PACK NO. 113  
G.E. 5 A.H. NIMBUS

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 130

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.50

CELL VOLTAGES  
1 2 3 4 5

4783.	5.81	1.49	1.17	1.18	1.15	1.18	1.14	END OF DISCHARGE
4813.	5.82	1.48	1.17	1.19	1.17	1.18	1.16	
4890.	5.84	1.47	1.17	1.18	1.15	1.18	1.15	
4920.	5.83	1.47	1.17	1.19	1.15	1.18	1.14	
4989.	5.77	1.50	1.16	1.17	1.14	1.17	1.12	

4783.	7.11	.99	1.43	1.42	1.41	1.42	1.41	END OF CHARGE
4813.	7.09	.99	1.43	1.43	1.42	1.43	1.42	
4890.	7.12	.98	1.42	1.42	1.41	1.42	1.41	
4920.	7.12	.99	1.43	1.42	1.42	1.42	1.41	
4989.	7.11	.97	1.42	1.42	1.41	1.42	1.40	

PACK NO. 114  
G.E. 5 A.H. NIMBUS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 130

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN

CYCLE PACK CURRENT  
NO. VOLTAGES 2.50

CELL VOLTAGES

PSIA

END OF  
DISCHARGE

END OF  
CHARGE

	1	2	3	4	5			
4054.	5.38	2.45	1.07	1.13	1.09	1.11	1.03	35.249
4083.	5.43	2.44	1.08	1.13	1.10	1.11	1.06	35.077
4161.	5.44	2.44	1.08	1.12	1.08	1.12	1.09	35.719
4190.	5.39	2.44	1.08	1.12	1.07	1.11	1.04	35.794
4259.	5.37	2.45	1.05	1.12	1.06	1.11	1.07	36.394
4290.	5.36	2.46	1.06	1.12	1.06	1.11	1.03	36.490
4335.	5.41	2.46	1.09	1.12	1.08	1.11	1.04	36.875
4373.	5.38	2.48	1.07	1.11	1.06	1.07	1.09	37.068
4406.	5.48	2.48	1.11	1.11	1.07	1.11	1.11	37.496
4469.	5.55	2.44	1.10	1.13	1.13	1.12	1.11	38.031

1.63

4054.	7.22	1.65	1.44	1.47	1.45	1.45	1.45	39.636
4083.	7.22	1.63	1.45	1.47	1.45	1.45	1.45	39.464
4161.	7.23	1.62	1.45	1.47	1.45	1.45	1.46	39.732
4190.	7.24	1.65	1.45	1.47	1.45	1.45	1.45	39.892
4259.	7.22	1.65	1.44	1.47	1.45	1.45	1.46	40.385
4290.	7.23	1.66	1.44	1.47	1.45	1.45	1.44	40.278
4335.	7.24	1.66	1.45	1.47	1.45	1.45	1.45	40.556
4373.	7.24	1.67	1.45	1.48	1.45	1.44	1.46	39.250
4406.	7.24	1.66	1.45	1.47	1.45	1.45	1.45	40.631
4469.	7.25	1.66	1.45	1.48	1.46	1.45	1.45	41.818

PACK NO. 117  
GULTON 5 A.H. NIMBUS

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 110

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.50 1

CELL VOLTAGES  
2 3 4 5

END OF  
DISCHARGE

END OF  
CHARGE

4555.	6.17	1.50	1.24	1.23	1.24	1.23
4584.	6.12	1.49	1.23	1.22	1.23	1.22
4662.	6.26	1.50	1.26	1.25	1.25	1.25
4691.	6.25	1.50	1.26	1.24	1.25	1.25
4760.	6.21	1.50	1.25	1.24	1.23	1.24
4792.	6.19	1.50	1.25	1.23	1.24	1.23
4826.	6.18	1.50	1.24	1.23	1.24	1.23
4874.	6.18	1.51	1.24	1.23	1.24	1.23
4908.	6.16	1.51	1.24	1.23	1.24	1.23
4970.	6.18	1.49	1.25	1.23	1.24	1.23

108

4555.	7.82	.83	1.59	1.54	1.62	1.54	1.53
4584.	7.78	.83	1.58	1.53	1.62	1.53	1.52
4662.	7.20	.79	1.43	1.44	1.43	1.44	1.43
4691.	7.23	.62	1.45	1.45	1.44	1.44	1.44
4760.	7.23	.54	1.45	1.45	1.44	1.44	1.44
4792.	7.24	.55	1.45	1.45	1.45	1.44	1.44
4826.	7.22	.54	1.45	1.44	1.44	1.44	1.44
4874.	7.41	.50	1.49	1.47	1.51	1.46	1.47
4908.	7.43	.51	1.49	1.47	1.52	1.47	1.47
4970.	7.41	.50	1.49	1.47	1.51	1.47	1.47

PACK NO. 121  
GULTON 5 A.H. NIMBUS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 110

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN

CYCLE PACK CURRENT  
NO. VOLTAGES 2.50

CELL VOLTAGES

PSIA

END OF  
DISCHARGE

END OF  
CHARGE

	1	2	3	4	5	
4117.	5.99	2.50	1.21	1.21	1.21	14.786
4146.	5.93	2.47	1.20	1.20	1.20	12.385
4224.	5.92	2.47	1.19	1.19	1.20	- .425
4253.	5.91	2.47	1.19	1.19	1.19	.113
4353.	5.89	2.47	1.18	1.19	1.18	12.631
4398.	5.88	2.47	1.18	1.18	1.18	12.666
4436.	5.93	2.49	1.19	1.19	1.20	12.432
4469.	5.91	2.48	1.18	1.19	1.19	12.362
4532.	6.29	2.49	1.26	1.27	1.26	12.502
1.38						
4117.	7.85	1.38	1.60	1.55	1.59	18.638
4146.	7.44	.78	1.49	1.52	1.51	12.888
4224.	7.44	.76	1.48	1.52	1.51	- .753
4253.	7.44	.76	1.47	1.52	1.50	- .331
4353.	7.45	.77	1.47	1.52	1.50	13.146
4398.	7.44	.75	1.47	1.52	1.50	13.181
4436.	7.46	.78	1.46	1.52	1.51	12.970
4469.	7.43	.77	1.46	1.52	1.50	12.807
4532.	7.41	.77	1.46	1.52	1.50	12.678

PACK NO. 120  
GULTON 5 A.H. NIMBUS

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 120

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
4705.	5.80	1.49	1.23	.93	1.22	1.23	1.21	
4763.	5.96	1.50	1.24	1.03	1.23	1.24	1.21	
4793.	5.95	1.49	1.24	1.04	1.23	1.24	1.21	
4894.	5.92	1.51	1.23	1.04	1.23	1.24	1.22	
4976.	5.95	1.53	1.24	1.04	1.22	1.24	1.22	
5009.	5.95	1.51	1.24	1.04	1.22	1.24	1.22	
5072.	5.56	1.51	1.11	1.12	1.12	1.12	1.09	
8262.	5.92	1.50	1.23	1.04	1.22	1.23	1.21	
4705.	7.38	.90	1.44	1.61	1.43	1.44	1.44	
4763.	7.27	.91	1.42	1.55	1.42	1.43	1.43	
4793.	7.32	.91	1.44	1.56	1.43	1.44	1.44	
4894.	7.28	.92	1.43	1.55	1.44	1.44	1.43	
4976.	7.32	.91	1.44	1.55	1.43	1.44	1.44	
5009.	7.29	.92	1.44	1.54	1.43	1.44	1.44	
5072.	7.89	.92	1.56	1.56	1.57	1.60	1.61	
8262.	7.29	.91	1.42	1.55	1.43	1.44	1.43	

END OF CHARGE

PACK NO. 318  
GULTON 5 A.H. NIMBUS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 120

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN

CYCLE PACK CURRENT

NO. VOLTAGES 2.50

CELL VOLTAGES

PSIA

1

2

3

4

5

END OF  
DISCHARGE

4085.	5.44	2.45	1.11	1.10	1.16	.99	1.11	11.959
4143.	5.58	2.44	1.13	1.12	1.18	1.06	1.13	10.419
4172.	5.57	2.45	1.14	1.12	1.16	1.06	1.12	10.932
4241.	5.44	2.46	1.13	1.10	1.16	.97	1.12	11.516
4272.	5.42	2.47	1.12	1.09	1.15	.96	1.11	11.516
4317.	5.44	2.46	1.13	1.08	1.16	.98	1.11	11.306
4355.	5.53	2.49	1.13	1.11	1.15	1.05	1.11	11.656
4388.	5.30	2.48	1.08	1.05	1.14	.96	1.10	11.213
4451.	5.58	2.44	1.14	1.12	1.16	1.05	1.12	11.585

END OF  
CHARGE

4085.	7.35	1.50	1.48	1.47	1.48	1.50	1.48	22.147
4143.	7.37	1.52	1.48	1.47	1.49	1.50	1.48	20.735
4172.	7.36	1.50	1.48	1.46	1.48	1.50	1.47	21.272
4241.	7.34	1.51	1.48	1.46	1.48	1.50	1.48	21.377
4272.	7.34	1.52	1.47	1.46	1.48	1.50	1.46	21.295
4317.	7.35	1.51	1.48	1.46	1.48	1.50	1.46	21.062
4355.	7.33	1.53	1.46	1.45	1.47	1.50	1.46	22.509
4388.	7.34	1.49	1.47	1.45	1.48	1.50	1.46	19.510
4451.	7.35	1.49	1.47	1.46	1.49	1.50	1.46	21.669



PACK NO. 127  
GULTON 5 A.H. NIMBUS

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 130

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.50

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

4704.	5.69	1.48	1.14	1.14	1.17	1.17	1.14
4731.	5.79	1.45	1.16	1.15	1.16	1.18	1.16
4808.	5.76	1.45	1.15	1.15	1.17	1.18	1.17
4838.	5.77	1.45	1.15	1.15	1.17	1.18	1.16
4907.	5.74	1.46	1.15	1.14	1.17	1.18	1.16
4939.	5.76	1.46	1.15	1.14	1.17	1.18	1.14
4972.	5.76	1.45	1.15	1.15	1.17	1.18	1.16
5021.	5.69	1.49	1.13	1.12	1.15	1.16	1.13
5054.	5.75	1.47	1.15	1.14	1.15	1.17	1.15
5117.	5.80	1.46	1.16	1.15	1.16	1.18	1.16

END OF  
CHARGE

4704.	7.10	.98	1.42	1.43	1.43	1.42	1.42
4731.	7.14	.98	1.43	1.43	1.42	1.42	1.42
4808.	7.13	.97	1.42	1.44	1.42	1.42	1.43
4838.	7.14	.96	1.43	1.44	1.43	1.43	1.43
4907.	7.13	.96	1.43	1.43	1.43	1.43	1.43
4939.	7.15	.97	1.43	1.43	1.43	1.43	1.42
4972.	7.13	1.00	1.43	1.44	1.43	1.43	1.43
5021.	7.13	1.00	1.42	1.43	1.42	1.42	1.42
5054.	7.14	1.00	1.43	1.43	1.42	1.42	1.42
5117.	7.15	1.00	1.43	1.43	1.42	1.42	1.42

PACK NO. 128		GULTON 5 A.H. NIMBUS		DEPTH OF DISCHARGE 25		TEST TEMPERATURE 40 C		
				PERCENT OF RECHARGE 130		ORBIT PERIOD 90 MIN.		
CYCLE NO.	PACK VOLTAGES 2.50	CURRENT 1	2	3	4	5	PSIA	
4008.	4.22	2.38	1.12	.88	.00	1.15	1.09	25.346
4115.	4.39	2.46	1.12	1.08	.00	1.14	1.07	25.570
4184.	4.04	2.45	1.11	.75	.00	1.14	1.07	26.321
4215.	3.93	2.45	1.11	.65	.00	1.14	1.05	26.377
4260.	4.30	2.45	1.11	1.03	.00	1.13	1.05	26.355
4298.	4.33	2.46	1.11	1.06	.00	1.13	1.06	26.702
4331.	4.30	2.46	1.11	1.03	.00	1.13	1.05	26.758
4394.	4.44	2.39	1.12	1.14	.00	1.15	1.06	27.554
1.63								END OF DISCHARGE
4008.	5.80	1.63	1.45	1.44	.00	1.44	1.50	31.534
4115.	5.84	1.65	1.45	1.46	.00	1.44	1.50	31.231
4184.	5.82	1.67	1.45	1.45	.00	1.44	1.51	32.778
4215.	5.82	1.67	1.45	1.45	.00	1.44	1.49	32.397
4260.	5.83	1.66	1.45	1.46	.00	1.44	1.50	31.769
4298.	5.84	1.68	1.45	1.45	.00	1.44	1.50	32.901
4331.	5.84	1.67	1.46	1.46	.00	1.44	1.50	32.632
4394.	5.86	1.66	1.46	1.47	.00	1.45	1.50	34.134
1.63								END OF CHARGE

PACK NO. 59  
GULTON 6 A.H. 3RD ELECTRODE R 10 10 10 10 10

DEPTH OF DISCHARGE 25

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	3RD ELECT VOLTAGES				CELL VOLTAGES				END OF DISCHARGE
			1	2	3	4	1	2	3	4	
4614.	4.86	2.91	.169	.089	.004	.133	.115	1.22	1.22	.01	1.22
4673.	4.83	2.99	.154	.079	.004	.128	.111	1.21	1.21	.00	1.21
4830.	4.85	3.07	.157	.119	.002	.128	.158	1.23	1.23	.01	1.22
4912.	4.89	2.99	.159	.106	.000	.118	.154	1.23	1.23	.01	1.23
5010.	4.83	3.07	.154	.097	.003	.112	.141	1.22	1.22	.00	1.21

TRIP POINT

4614.	5.82	.10	.127	.109	.003	.168	.135	1.46	1.47	.01	1.46
4673.	5.07	.97	.108	.093	.002	.152	.129	1.50	1.55	.01	1.52
4830.	5.97	.27	.139	.133	.018	.169	.186	1.50	1.51	.03	1.52
4912.	5.89	.16	.116	.118	.001	.150	.172	1.47	1.48	.01	1.48
5010.	5.88	.13	.127	.115	.002	.153	.172	1.47	1.48	.01	1.49

AH IN

END OF CHARGE

4614.	5.67	.06	.147	.119	.004	.175	.147	1.42	1.42	.01	1.42
4673.	5.63	.05	.141	.117	.005	.169	.148	1.41	1.41	.01	1.41
4830.	5.72	.08	.146	.149	.001	.163	.181	1.44	1.44	.01	1.44
4912.	5.67	.06	.145	.144	.001	.164	.189	1.43	1.43	.01	1.43
5010.	5.67	.05	.139	.133	.004	.153	.180	1.43	1.42	.01	1.42

PACK NO. 71  
GULTON 6 A.H. 3RD ELECTRODE R 10 10 10 10 10

CYCLE NO.	PACK VOLTAGE	CURRENT	DEPTH OF DISCHARGE					40	TEST TEMPERATURE 0 C					END OF DISCHARGE
			3RD	ELECT	VOLTAGES	CELL	VOLTAGES		ORBIT PERIOD 90 MIN.					
			1	2	3	4	5	1	2	3	4	5		
4677.	4.71	4.85	.099	.043	.115	.075	.000	1.20	1.20	1.20	1.13	.00	2.425	
4736.	4.64	4.80	.102	.053	.118	.065	.000	1.19	1.19	1.19	1.10	.00	2.402	
4891.	4.57	4.95	.111	.078	.125	.038	.000	1.19	1.19	1.19	1.04	.00	2.433	
4971.	4.49	4.81	.001	.074	.110	.032	.000	1.18	1.18	1.18	.99	.00	2.433	
5069.	3.42	3.67	.093	.072	.103	.009	.000	1.19	1.20	1.20	.14	.00	2.082	

TRIP  
POINT

AH IN  
END OF  
CHARGE

4677.	6.05	1.43	.084	.063	.117	.146	.000	1.51	1.51	1.51	1.55	.00
4736.	6.33	2.82	.072	.057	.100	.147	.000	1.56	1.57	1.57	1.65	.00
4891.	6.23	2.21	.079	.074	.103	.149	.000	1.56	1.55	1.56	1.59	.00
4971.	6.04	1.13	.117	.118	.137	.144	.000	1.52	1.51	1.51	1.53	.00
5069.	5.87	.63	.119	.132	.142	.002	.000	1.52	1.51	1.50	1.38	.00
4677.	5.72	.32	.128	.079	.143	.126	.000	1.43	1.44	1.43	1.44	.00
4736.	5.70	.20	.129	.087	.145	.116	.000	1.43	1.43	1.43	1.43	.00
4891.	5.57	.03	.137	.112	.153	.101	.000	1.41	1.41	1.40	1.39	.00
4971.	5.55	.06	.137	.114	.145	.095	.000	1.40	1.40	1.40	1.38	.00
5069.	5.45	.03	.137	.119	.150	.002	.000	1.40	1.40	1.39	1.30	.00

PACK NO. 11  
GULTON 6 A.H. 3RD ELECTRODE R 24 24 10 B 24

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	DEPTH OF DISCHARGE					CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	1	2	3	4	5	
5744.	4.40	4.71	.112	.279	.000	.184	.348	1.08	1.09	.00	1.16	1.10	2.387
5805.	4.40	4.68	.045	.246	.000	.183	.347	1.07	1.09	.00	1.16	1.11	2.364
5909.	4.22	4.71	.014	.064	.000	.219	.310	1.06	1.03	.00	1.12	1.03	2.393
6011.	4.33	4.70	.012	.216	.000	.241	.343	1.16	1.06	.00	1.09	1.05	2.378
6092.	4.60	4.73	.145	.028	.000	.059	.350	1.11	1.13	.00	1.07	1.13	2.391
6191.	4.54	4.71	.212	.212	.000	.140	.380	1.15	1.14	.00	1.13	1.15	2.377

TRIP  
POINT

5744.	6.36	3.73	.195	.287	.000	.204	.287	1.59	1.59	.00	1.61	1.58	
5805.	6.41	3.80	.178	.268	.000	.229	.296	1.60	1.59	.00	1.63	1.59	
5909.	6.29	3.64	.179	.131	.000	.302	.269	1.59	1.55	.00	1.61	1.55	
6011.	6.28	3.72	.240	.239	.000	.265	.303	1.60	1.56	.00	1.59	1.55	
6092.	6.27	3.40	.173	.136	.000	.139	.304	1.55	1.58	.00	1.57	1.58	
6191.	6.01	1.31	.200	.193	.000	.149	.322	1.50	1.52	.00	1.51	1.53	

AH IN  
END OF CHARGE

5744.	5.55	.08	.204	.325	.000	.190	.415	1.39	1.39	.00	1.39	1.39	2.471
5805.	5.54	.07	.156	.298	.000	.200	.406	1.39	1.39	.00	1.39	1.39	2.574
5909.	5.53	.14	.132	.143	.000	.262	.400	1.40	1.38	.00	1.39	1.38	2.945
6011.	5.49	.09	.151	.278	.000	.216	.406	1.39	1.38	.00	1.39	1.37	2.857
6092.	5.53	.09	.212	.119	.000	.140	.460	1.39	1.39	.00	1.40	1.41	2.654
6191.	5.54	.07	.225	.227	.000	.135	.432	1.39	1.39	.00	1.30	1.39	2.571

PACK NO. 23  
GULTON 6 A.H. 3RD ELECTRODE R 12 18 20 29 24

DEPTH OF DISCHARGE 25

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT 3.00	3RD ELECT VOLTAGES				CELL VOLTAGES					
			1	2	3	4	5	1	2	3	4	5
5728.	5.80	2.99	.154	.171	.165	.186	.294	1.17	1.17	1.17	1.16	1.16
5788.	5.80	3.00	.152	.171	.159	.177	.297	1.17	1.17	1.17	1.16	1.16
5897.	5.77	3.09	.143	.159	.158	.189	.259	1.16	1.16	1.16	1.16	1.16
5994.	5.76	3.04	.147	.172	.161	.200	.296	1.16	1.16	1.16	1.16	1.16
6075.	5.96	3.09	.139	.159	.148	.188	.285	1.16	1.16	1.16	1.15	1.14
6174.	5.78	3.11	.148	.159	.156	.197	.292	1.17	1.16	1.16	1.16	1.16
5728.	7.11	.03	.205	.219	.226	.236	.290	1.43	1.43	1.43	1.42	1.43
5788.	7.20	.41	.203	.219	.225	.228	.289	1.45	1.45	1.44	1.44	1.45
5897.	7.13	.08	.200	.219	.222	.241	.284	1.43	1.43	1.43	1.43	1.43
5994.	7.06	.03	.206	.229	.232	.262	.332	1.42	1.42	1.42	1.42	1.42
6075.	7.03	.03	.212	.229	.236	.261	.332	1.41	1.42	1.41	1.41	1.41
6174.	7.05	.03	.209	.217	.226	.248	.340	1.42	1.42	1.42	1.41	1.42
5728.	6.89	.01	.209	.229	.232	.248	.366	1.38	1.39	1.39	1.38	1.38
5788.	6.90	.01	.202	.229	.226	.237	.365	1.38	1.39	1.39	1.38	1.38
5897.	6.90	.01	.198	.225	.225	.256	.354	1.38	1.39	1.39	1.39	1.38
5994.	6.90	.02	.202	.232	.234	.266	.372	1.39	1.39	1.39	1.39	1.39
6075.	6.89	.03	.219	.248	.252	.296	.410	1.39	1.39	1.39	1.40	1.40
6174.	6.90	.02	.205	.219	.225	.262	.386	1.38	1.39	1.39	1.39	1.38

TRIP  
POINT

AH IN  
END OF  
CHARGE  
1.585  
1.656  
1.801  
1.640  
1.782  
1.745

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PACK NO. 35      DEPTH OF DISCHARGE 15      TEST TEMPERATURE 40 C  
 GULTON 6 A.H. 3RD ELECTRODE R 47 47 47 47 47      ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	3RD ELECT VOLTAGES					CELL VOLTAGES					
			1	2	3	4	5	1	2	3	4	5	
3729.	5.66	1.80	.125	.091	.091	.158	.174	1.13	1.13	1.13	1.15	1.15	.887 END OF
3895.	5.68	1.79	.125	.095	.095	.159	.169	1.14	1.14	1.13	1.15	1.15	.882 DISCHARGE
3993.	5.68	1.80	.128	.102	.097	.159	.182	1.14	1.14	1.13	1.16	1.15	.887
4072.	5.70	1.82	.092	.077	.057	.121	.149	1.08	1.12	1.10	1.11	1.11	.898
4171.	5.57	1.85	.114	.078	.081	.150	.178	1.11	1.12	1.11	1.13	1.13	.914
3729.	6.96	.09	.235	.188	.192	.288	.297	1.40	1.40	1.40	1.40	1.39	TRIP
3895.	6.94	.07	.251	.205	.210	.453	.338	1.39	1.40	1.39	1.39	1.39	POINT
4072.	6.93	.08	.238	.189	.180	.287	.325	1.39	1.40	1.39	1.40	1.39	
4171.	6.99	.22	.227	.179	.179	.278	.302	1.40	1.41	1.40	1.41	1.40	
3729.	6.82	.06	.273	.219	.221	.421	.393	1.37	1.37	1.37	1.37	1.36	AH IN
3895.	6.82	.06	.273	.228	.228	.425	.397	1.37	1.37	1.37	1.37	1.37	1.141 END OF
3993.	6.83	.06	.272	.229	.229	.428	.408	1.37	1.38	1.37	1.37	1.37	CHARGE
4072.	6.82	.06	.271	.215	.209	.430	.413	1.37	1.38	1.38	1.38	1.38	1.172
4171.	6.81	.05	.269	.209	.210	.421	.408	1.37	1.37	1.37	1.37	1.37	1.157
													1.154

8

PACK NO. 47  
GULTON 6 A.H. 3RD ELECTRODE R 11 47 12 36 47

DEPTH OF DISCHARGE 25  
TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT 3.00	3RD ELECT VOLTAGES					CELL VOLTAGES					
			1	2	3	4	5	1	2	3	4	5	
4394.	5.71	2.94	.115	.137	.155	.097	.084	1.16	1.15	1.15	1.15	1.14	1.475 END OF
4455.	5.66	2.95	.114	.146	.145	.096	.089	1.15	1.14	1.14	1.14	1.13	1.478 DISCHARGE
4560.	5.64	2.95	.112	.142	.145	.097	.076	1.14	1.14	1.14	1.14	1.12	1.486
4661.	5.67	2.98	.113	.134	.144	.108	.108	1.13	1.14	1.14	1.15	1.13	1.500
4743.	5.76	2.95	.121	.147	.140	.112	.124	1.17	1.17	1.16	1.16	1.15	1.475
4841.	5.65	2.94	.115	.112	.134	.102	.104	1.16	1.12	1.14	1.14	1.13	1.483

TRIP  
POINT

4394.	6.98	.05	.257	.283	.431	.244	.241	1.41	1.41	1.40	1.40	1.40	1.40
4455.	7.25	1.01	.267	.277	.287	.261	.259	1.44	1.45	1.45	1.47	1.46	
4560.	6.97	.13	.259	.293	.428	.250	.230	1.41	1.41	1.40	1.40	1.39	
4661.	7.18	1.42	.274	.278	.292	.272	.278	1.44	1.45	1.44	1.46	1.45	
4743.	6.98	.11	.283	.271	.417	.276	.290	1.41	1.41	1.40	1.41	1.40	
4841.	7.16	1.48	.282	.217	.301	.266	.284	1.44	1.44	1.44	1.46	1.46	

END OF  
CHARGE

4394.	6.82	.05	.231	.239	.389	.206	.199	1.37	1.37	1.37	1.37	1.36	1.996
4455.	6.81	.04	.242	.239	.393	.219	.212	1.37	1.37	1.37	1.37	1.36	2.093
4560.	6.81	.05	.233	.247	.390	.213	.194	1.38	1.38	1.37	1.37	1.36	2.128
4661.	6.81	.05	.241	.238	.387	.225	.230	1.38	1.37	1.37	1.37	1.37	2.203
4743.	6.80	.05	.252	.236	.380	.237	.001	1.37	1.37	1.37	1.37	1.36	2.186
4841.	6.78	.04	.252	.187	.390	.220	.238	1.37	1.36	1.36	1.36	1.36	2.318

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PACK NO.		DEPTH OF DISCHARGE		TEST TEMPERATURE	
G.E.		3RD ELECTRODE R		ORBIT PERIOD	
60	12 A.H.	3	3	25	0 C
		3	3		90 MIN.

CYCLE NO.	PACK CURRENT VOLTAGE	3RD 1	ELECT VOLTAGES			CELL VOLTAGES						
			2	3	4	5	1	2	3	4	5	
2244.	6.07	5.99	.077	.056	.025	.018	.007	1.22	1.23	1.22	1.23	1.22
2308.	6.01	6.07	.074	.054	.019	.015	.012	1.21	1.22	1.21	1.21	1.20
2411.	5.98	6.25	.119	.070	.030	.019	.007	1.21	1.21	1.20	1.21	1.20
2513.	6.02	6.09	.090	.071	.025	.020	.026	1.21	1.22	1.21	1.22	1.21
2595.	6.08	6.06	.115	.058	.026	.022	.031	1.23	1.23	1.22	1.23	1.22
2692.	6.01	5.96	.104	.098	.027	.016	.026	1.21	1.22	1.21	1.21	1.20

2244.	7.26	.96	.150	.217	.094	.412	.509	1.45	1.46	1.46	1.46	1.47
2308.	7.37	.86	.119	.207	.063	.325	.493	1.46	1.49	1.47	1.49	1.49
2411.	7.30	.99	.170	.249	.092	.340	.447	1.46	1.47	1.46	1.47	1.47
2513.	7.28	.92	.194	.255	.100	.348	.464	1.46	1.47	1.46	1.47	1.47
2595.	7.34	1.00	.243	.359	.132	.471	.535	1.46	1.48	1.47	1.48	1.48
2692.	7.30	.96	.141	.220	.075	.369	.431	1.46	1.47	1.46	1.47	1.47

2244.	7.43	.97	.754	.745	.659	.598	.595	1.50	1.51	1.50	1.48	1.48
2308.	7.47	.93	.744	.711	.616	.597	.605	1.50	1.51	1.51	1.49	1.49
2411.	7.50	1.02	.753	.709	.641	.639	.646	1.51	1.52	1.51	1.49	1.49
2513.	7.43	.94	.746	.656	.579	.584	.606	1.49	1.50	1.50	1.48	1.48
2595.	7.47	.96	.762	.715	.654	.618	.659	1.50	1.51	1.51	1.49	1.49
2692.	7.51	.96	.764	.677	.657	.633	.648	1.51	1.53	1.51	1.50	1.50

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CELL VOLTAGES

CELL VOLTAGES

2 3 4 5

1589.	5.76	9.32	.085	.107	.012	.005	.003	1.15	1.14	1.17	1.17	1.17	4.708
1645.	5.75	9.29	.083	.114	.009	.004	.009	1.15	1.14	1.17	1.17	1.16	4.699
1754.	5.73	9.47	.086	.112	.011	.004	.007	1.14	1.13	1.17	1.17	1.16	4.795
1851.	5.68	9.41	.112	.130	.017	.012	.022	1.13	1.12	1.16	1.17	1.16	4.814
1933.	5.89	9.47	.121	.140	.020	.011	.032	1.19	1.19	1.19	1.19	1.19	4.761
2030.	5.78	9.41	.104	.122	.012	.007	.024	1.16	1.16	1.17	1.17	1.17	4.749

1589.	5.76	9.32	.085	.107	.012	.005	.003	1.15	1.14	1.17	1.17	1.17	4.708
1645.	5.75	9.29	.083	.114	.009	.004	.009	1.15	1.14	1.17	1.17	1.16	4.699
1754.	5.73	9.47	.086	.112	.011	.004	.007	1.14	1.13	1.17	1.17	1.16	4.795
1851.	5.68	9.41	.112	.130	.017	.012	.022	1.13	1.12	1.16	1.17	1.16	4.814
1933.	5.89	9.47	.121	.140	.020	.011	.032	1.19	1.19	1.19	1.19	1.19	4.761
2030.	5.78	9.41	.104	.122	.012	.007	.024	1.16	1.16	1.17	1.17	1.17	4.749

	7.40	3.07	.252	.239	.090	.420	.073	1.48	1.47	1.47	1.50	1.50	AH IN
1589.													
1645.	7.91	8.12	.242	.244	.066	.423	.083	1.58	1.56	1.54	1.64	1.61	TRIP
1754.	7.51	5.00	.242	.243	.092	.421	.078	1.50	1.50	1.49	1.53	1.53	POINT

[illegible]

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PACK NO. 175  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE 25  
STABILIZER

TEST TEMPERATURE -20 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 2.50

CELL VOLTAGES

1

3

4

5

1851.	3.03	2.39	1.04	1.08	.00	.00	.98
1881.	3.02	2.45	1.04	1.08	.00	.00	.97
1958.	3.05	2.40	1.04	1.09	.00	.00	.98
1988.	3.04	2.43	1.03	1.09	.00	.00	.98
2057.	2.97	2.43	.99	1.06	.00	.00	.99
2089.	2.98	2.42	1.01	1.06	.00	.00	.97

END OF  
DISCHARGE

5.00

1851.	4.86	5.22	1.62	1.57	.00	.00	1.61
1881.	4.92	5.08	1.64	1.60	.00	.00	1.63
1958.	4.94	5.00	1.64	1.61	.00	.00	1.63
1988.	4.94	5.05	1.64	1.61	.00	.00	1.63
2057.	4.92	5.04	1.63	1.58	.00	.00	1.65
2089.	4.90	5.04	1.63	1.58	.00	.00	1.62

END OF  
CHARGE

PACK NO. 92  
SONOTONC 5 A.H.

DEPTH OF DISCHARGE 25  
STABILIZER

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK CURRENT VOLTAGE 2.50	CELL VOLTAGES					END OF DISCHARGE
		1	2	3	4	5	
2703.	5.56	2.48	1.10	1.12	1.13	1.12	1.08
2733.	5.53	2.46	1.10	1.12	1.12	1.12	1.06
2810.	5.48	2.48	1.09	1.11	1.12	1.11	1.04
2840.	5.50	2.48	1.10	1.11	1.12	1.12	1.04
2909.	5.40	2.49	1.08	1.09	1.10	1.10	1.02
2975.	5.62	2.48	1.11	1.13	1.13	1.13	1.12
3008.	5.55	2.49	1.10	1.12	1.12	1.11	1.10
3071.	5.97	2.47	1.24	1.05	1.23	1.24	1.22
2703.	8.02	5.07	1.58	1.57	1.58	1.61	1.70
2733.	8.01	5.07	1.58	1.57	1.57	1.60	1.70
2810.	7.98	5.11	1.57	1.56	1.57	1.60	1.66
2840.	7.97	5.02	1.58	1.57	1.58	1.60	1.66
2909.	7.98	5.01	1.58	1.56	1.57	1.60	1.66
2975.	7.89	5.02	1.56	1.56	1.57	1.60	1.61
3008.	7.92	5.01	1.57	1.56	1.57	1.61	1.61
3071.	7.31	5.01	1.44	1.55	1.44	1.45	1.44
5.00							
END OF CHARGE							

PACK NO. 322  
SONOTONC 5 A.H.

DEPTH OF DISCHARGE 40  
STABILIZER

TEST TEMPERATURE 0  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 4.00

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

2492.	4.25	3.98	1.03	1.10	.00	1.09	1.09
2522.	4.22	3.99	1.02	1.08	.00	1.08	1.07
2599.	4.22	3.91	1.04	1.07	.00	1.07	1.07
2629.	4.20	3.91	1.03	1.07	.00	1.07	1.06
2698.	4.15	3.95	1.02	1.06	.00	1.06	1.04
2764.	4.31	3.95	1.08	1.07	.00	1.05	1.06
2801.	4.19	3.98	1.05	1.07	.00	1.05	1.06
2852.	4.20	4.00	1.05	1.07	.00	1.05	1.07

END OF  
CHARGE

2492.	6.28	5.06	1.57	1.55	.00	1.58	1.58
2522.	6.29	5.11	1.59	1.54	.00	1.57	1.57
2599.	6.29	5.07	1.58	1.54	.00	1.57	1.58
2629.	6.28	4.81	1.57	1.54	.00	1.57	1.58
2698.	6.28	4.94	1.58	1.54	.00	1.58	1.57
2764.	6.34	4.95	1.58	1.54	.00	1.56	1.56
2801.	6.30	4.99	1.59	1.55	.00	1.58	1.57
2852.	6.25	5.27	1.55	1.54	.00	1.57	1.57

PACK NO. 273  
SONOTONE 5 A.H.

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE NO. PACK CURRENT  
VOLTAGE 2.50

DEPTH OF DISCHARGE 25  
STABILIZER

CELL VOLTAGES

END OF  
DISCHARGE

END OF  
CHARGE

CYCLE NO.	PACK VOLTAGE	CURRENT	1	2	3	4	5	END OF DISCHARGE
3032.	3.14	2.35	.02	.02	1.08	1.09	1.03	
3062.	3.17	2.35	.02	.02	1.08	1.09	1.06	
3101.	3.13	2.32	.02	.01	1.07	1.09	1.03	
3230.	3.03	2.32	.02	.02	1.07	1.08	.95	
3262.	3.14	2.38	.02	.02	1.08	1.10	1.02	
3295.	3.08	2.33	.02	.02	1.07	1.08	.99	
3344.	3.19	2.40	.02	.02	1.09	1.09	1.07	
3378.	3.08	2.30	.02	.02	1.07	1.08	.99	
3440.	3.04	2.48	.02	.02	1.04	1.05	1.00	

CYCLE NO.	PACK VOLTAGE	CURRENT	1	2	3	4	5	END OF CHARGE
3032.	4.35	5.00	.03	.03	1.43	1.42	1.42	
3062.	4.38	5.00	.03	.03	1.44	1.43	1.44	
3101.	4.35	5.08	.03	.04	1.43	1.43	1.43	
3230.	4.35	5.09	.03	.03	1.43	1.42	1.42	
3262.	4.38	5.13	.03	.03	1.44	1.43	1.42	
3295.	4.37	5.08	.03	.03	1.44	1.43	1.42	
3344.	4.37	5.07	.03	.03	1.43	1.43	1.43	
3378.	4.35	5.07	.03	.03	1.43	1.42	1.41	
3440.	4.37	5.06	.03	.03	1.44	1.43	1.42	

PACK NO. 299  
SCNOTONE 5 A.H.

DEPTH OF DISCHARGE 25  
STABILIZER

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
2754.	5.42	2.51	1.13	1.08	1.07	1.10	1.09
2784.	5.43	2.49	1.13	1.08	1.05	1.09	1.08
2861.	5.32	2.51	1.12	1.07	1.02	1.07	1.08
2891.	5.29	2.50	1.13	1.07	1.01	1.07	1.06
2960.	5.20	2.51	1.12	1.05	.97	1.05	1.05
2992.	5.18	2.50	1.12	1.04	.95	1.05	1.03
3025.	5.22	2.47	1.12	1.05	.96	1.05	1.03
3074.	5.41	2.44	1.15	1.07	1.05	1.10	1.07
3107.	5.28	2.49	1.13	1.05	1.01	1.08	1.03
3170.	5.12	2.49	1.12	1.03	.94	1.04	1.02

END OF  
DISCHARGE

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
2754.	7.35	5.04	1.48	1.48	1.48	1.47	1.47
2784.	7.36	5.04	1.48	1.47	1.47	1.46	1.47
2861.	7.35	4.98	1.48	1.48	1.47	1.47	1.48
2891.	7.36	5.01	1.48	1.48	1.47	1.47	1.47
2960.	7.34	5.00	1.48	1.47	1.47	1.47	1.48
2992.	7.35	5.04	1.48	1.47	1.46	1.46	1.47
3025.	7.38	5.01	1.48	1.47	1.46	1.46	1.46
3074.	7.34	4.96	1.48	1.47	1.47	1.47	1.47
3107.	7.34	4.97	1.48	1.47	1.47	1.47	1.46
3170.	7.34	4.97	1.48	1.48	1.48	1.47	1.47

END OF  
CHARGE

PACK NO. 312  
SONOTONE 5 A.H.

DEPTH OF DISCHARGE 40  
STABILIZER

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
2847.	3.91	1.48	1.00	.00	1.08	.94	.93	
2876.	3.88	1.49	.99	.00	1.07	.94	.91	
2954.	3.88	1.48	.99	.00	1.08	.93	.91	
2983.	3.84	1.47	.98	.00	1.08	.91	.90	
3052.	3.82	1.47	.98	.00	1.07	.92	.87	
3084.	3.74	1.48	.97	.00	1.08	.90	.81	
3166.	4.20	1.50	1.06	.00	1.10	1.03	1.03	
3200.	4.01	1.52	1.03	.00	1.08	.96	.97	
3262.	3.96	1.52	1.02	.00	1.08	.94	.95	

2847.	5.92	5.00	1.47	.00	1.43	1.45	1.48	END OF CHARGE
2876.	5.93	5.01	1.47	.00	1.44	1.45	1.48	
2954.	5.93	4.99	1.46	.00	1.43	1.44	1.48	
2983.	5.93	5.00	1.47	.00	1.44	1.45	1.48	
3052.	5.90	5.02	1.47	.00	1.44	1.45	1.48	
3084.	5.90	5.00	1.46	.00	1.43	1.45	1.48	
3166.	5.89	5.03	1.46	.00	1.43	1.45	1.48	
3200.	5.90	4.96	1.46	.00	1.43	1.44	1.47	
3262.	5.92	4.97	1.47	.00	1.43	1.45	1.47	
					1.44	1.45	1.48	



PACK NO. 174  
GU 1.25 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE

TEST TEMPERATURE -20 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES .63

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

1.	7.16	.66	1.44	1.44	1.44	1.44	1.44	1.44
3.	6.61	.65	1.35	1.35	1.26	1.35	1.35	1.34
9.	6.88	.66	1.33	1.48	1.24	1.34	1.34	1.51
17.	7.33	.66	1.46	1.51	1.44	1.42	1.53	1.53
58.	7.34	.65	1.42	1.51	1.51	1.38	1.55	1.55
90.	7.62	.66	1.52	1.52	1.53	1.53	1.54	1.54

END OF  
CHARGE

1.	9.65	1.25	1.91	1.93	1.92	1.92	1.97
3.	9.61	1.29	1.90	1.92	1.95	1.89	1.96
9.	9.43	1.03	1.88	1.80	1.99	1.93	1.84
17.	9.43	1.03	1.92	1.86	1.91	1.89	1.86
58.	9.49	1.03	1.89	1.91	1.88	1.95	1.88
90.	9.23	1.02	1.89	1.86	1.82	1.85	1.84

PACK NO. 388  
GU 1.25 A.H.

DEPTH OF DISCHARGE 60  
PERCENT OF RECHARGE

TEST TEMPERATURE -20 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 1.5

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

1.	5.37	1.50	1.08	1.03	1.08	1.07	1.10
3.	5.27	1.49	1.08	.97	1.08	1.06	1.10
9.	3.94	1.40	.94	.33	.93	.76	.99
17.	2.18	1.50	.81	.52	.87	.24	.78
37.	7.04	1.02	1.44	1.23	1.45	1.45	1.47

END OF  
CHARGE

1.	9.76	1.17	1.95	1.95	1.96	1.94	1.94
3.	9.88	1.26	1.97	1.98	1.98	1.97	1.96
9.	9.75	1.01	1.97	2.06	1.89	1.94	1.87
17.	9.68	1.01	1.89	2.06	1.90	1.91	1.90
37.	9.85	1.01	1.93	2.06	1.93	1.99	1.93

PACK NO. 198  
GU 1.25 A.H.

DEPTH OF DISCHARGE 60  
PERCENT OF RECHARGE

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 1.5 1

CELL VOLTAGES  
2 3 4 5

END OF  
DISCHARGE

1.	8.09	1.43	1.62	1.61	1.63	1.63	1.62
75.	7.91	1.32	1.59	1.59	1.58	1.58	1.58
104.	6.14	1.49	1.23	1.24	1.24	1.24	1.25
173.	5.68	1.49	1.13	1.14	1.15	1.14	1.16
205.	5.67	1.49	1.13	1.14	1.15	1.14	1.14
246.	5.68	1.49	1.13	1.14	1.13	1.14	1.14
287.	5.67	1.53	1.13	1.14	1.14	1.15	1.13
326.	5.63	1.50	1.12	1.13	1.12	1.13	1.13
381.	5.69	1.50	1.14	1.15	1.15	1.15	1.14

END OF  
CHARGE

1.	7.10	1.25	1.42	1.43	1.43	1.43	1.43
75.	8.49	1.24	1.70	1.70	1.70	1.70	1.70
104.	8.91	1.23	1.80	1.81	1.79	1.79	1.76
173.	8.79	1.23	1.76	1.79	1.76	1.76	1.74
205.	8.76	1.23	1.76	1.79	1.75	1.76	1.72
246.	8.72	1.23	1.75	1.77	1.72	1.74	1.71
287.	8.66	1.26	1.74	1.77	1.72	1.75	1.70
326.	8.76	1.25	1.76	1.78	1.73	1.75	1.72
381.	8.70	1.25	1.76	1.78	1.74	1.75	1.70

PACK NO. 308  
GU 1.25 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES .63

CELL VOLTAGES

1

3

4

5

END OF  
DISCHARGE

1.	7.19	.63	1.44	1.43	1.44	1.44	1.43
75.	7.25	.63	1.44	1.45	1.45	1.45	1.45
104.	7.26	.62	1.44	1.45	1.45	1.45	1.45
173.	7.25	.66	1.44	1.44	1.45	1.45	1.45
205.	7.25	.65	1.44	1.44	1.45	1.45	1.45
246.	7.25	.62	1.44	1.45	1.47	1.46	1.45
297.	7.24	.63	1.44	1.44	1.45	1.44	1.45
326.	7.21	.62	1.44	1.45	1.46	1.45	1.44
381.	7.25	.62	1.44	1.45	1.45	1.45	1.45

END OF  
CHARGE

1.	8.73	1.27	1.78	1.78	1.71	1.81	1.73
75.	8.56	1.25	1.69	1.71	1.72	1.72	1.70
104.	8.58	1.24	1.70	1.71	1.73	1.73	1.71
173.	8.51	1.25	1.68	1.70	1.72	1.71	1.70
205.	8.53	1.25	1.68	1.70	1.72	1.71	1.70
246.	8.52	1.25	1.68	1.71	1.73	1.72	1.70
287.	8.46	1.29	1.66	1.69	1.71	1.70	1.69
326.	8.54	1.28	1.68	1.72	1.74	1.72	1.71
381.	8.62	1.28	1.69	1.73	1.75	1.73	1.72

PACK NO. 315  
GULTON 4 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.20 1 2 3 4 5

CELL VOLTAGES

CYCLE NO.	PACK VOLTAGE	CURRENT 1.20	1	2	3	4	5	END OF DISCHARGE
8570.	6.19	1.18	1.24	1.24	1.24	1.24	1.24	1.24
8639.	6.19	1.19	1.24	1.24	1.24	1.24	1.24	1.25
8707.	6.20	1.19	1.24	1.23	1.23	1.24	1.23	1.23
8776.	6.19	1.17	1.24	1.24	1.24	1.24	1.24	1.24
8808.	6.17	1.18	1.24	1.23	1.24	1.24	1.24	1.23
8841.	6.16	1.19	1.23	1.23	1.24	1.23	1.22	1.22
8890.	6.23	1.18	1.25	1.24	1.25	1.25	1.25	1.25
8924.	6.22	1.18	1.25	1.24	1.25	1.25	1.24	1.24
8986.	6.23	1.18	1.25	1.24	1.26	1.25	1.24	1.24

END OF  
CHARGE

CYCLE NO.	PACK VOLTAGE	CURRENT 1.20	1	2	3	4	5	END OF CHARGE
8570.	7.65	.42	1.51	1.58	1.51	1.54	1.53	1.53
8639.	7.76	.56	1.53	1.62	1.52	1.57	1.55	1.55
8707.	7.80	.55	1.53	1.60	1.51	1.56	1.53	1.53
8776.	7.72	.57	1.53	1.60	1.52	1.56	1.54	1.54
8808.	7.72	.55	1.53	1.60	1.52	1.56	1.53	1.53
8841.	7.71	.54	1.53	1.59	1.52	1.56	1.53	1.53
8890.	7.74	.52	1.53	1.60	1.52	1.56	1.55	1.55
8924.	7.77	.56	1.54	1.61	1.53	1.57	1.55	1.55
8986.	7.73	.50	1.53	1.60	1.52	1.57	1.54	1.54

PACK NO. 326  
GULTON 4 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 2.00

CELL VOLTAGES  
1 2 3 4 5

9042.	5.95	1.99	1.19	1.20	1.19	1.19	1.19	1.19	1.19	END OF DISCHARGE
9071.	5.95	1.98	1.19	1.19	1.19	1.19	1.19	1.19	1.20	
9149.	5.94	2.01	1.19	1.20	1.19	1.19	1.19	1.19	1.20	
9178.	5.95	1.99	1.19	1.20	1.19	1.19	1.19	1.19	1.20	
9247.	5.94	1.98	1.19	1.19	1.19	1.19	1.19	1.19	1.20	
9279.	5.92	1.99	1.19	1.19	1.19	1.19	1.18	1.18	1.18	
9361.	5.98	2.00	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
9395.	5.96	2.03	1.19	1.20	1.19	1.19	1.19	1.19	1.19	
9457.	5.99	2.00	1.20	1.21	1.20	1.20	1.20	1.20	1.20	

9042.	7.69	1.15	1.54	1.52	1.55	1.56	1.53	END OF CHARGE
9071.	7.69	.61	1.54	1.52	1.55	1.55	1.53	
9149.	7.70	.66	1.54	1.53	1.55	1.56	1.54	
9178.	7.71	.65	1.55	1.53	1.56	1.56	1.54	
9247.	7.81	.81	1.57	1.54	1.57	1.58	1.56	
9279.	7.76	.71	1.56	1.53	1.56	1.57	1.54	
9361.	7.75	.66	1.56	1.53	1.56	1.57	1.54	
9395.	7.75	.67	1.56	1.53	1.57	1.57	1.53	
9457.	7.74	.67	1.56	1.53	1.57	1.57	1.53	

PACK NO. 204  
GULTON 4 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 2.00 1 2 3 4 5

END OF  
DISCHARGE

8844.	5.77	1.97	1.16	1.16	1.18	1.16	1.16
8873.	5.78	1.95	1.16	1.16	1.18	1.16	1.17
8951.	5.70	2.00	1.15	1.13	1.16	1.15	1.15
8980.	5.72	2.02	1.15	1.14	1.16	1.15	1.15
9049.	6.56	2.01	1.32	1.33	1.33	1.30	1.33
9080.	5.73	2.00	1.15	1.14	1.17	1.15	1.14
9125.	5.73	1.99	1.15	1.14	1.17	1.14	1.15
9163.	5.84	2.00	1.17	1.17	1.18	1.17	1.17
9196.	5.79	2.00	1.16	1.16	1.18	1.16	1.15
9259.	5.83	1.99	1.17	1.17	1.19	1.16	1.16

END OF  
CHARGE

34

8844.	7.34	1.29	1.47	1.46	1.46	1.53	1.48
8873.	7.36	1.23	1.47	1.45	1.46	1.53	1.49
8951.	7.38	1.22	1.48	1.46	1.46	1.54	1.48
8980.	7.38	1.23	1.47	1.46	1.46	1.55	1.48
9049.	7.34	1.25	1.47	1.45	1.45	1.53	1.48
9080.	7.33	1.27	1.47	1.45	1.46	1.53	1.47
9125.	7.35	1.24	1.47	1.45	1.46	1.54	1.47
9163.	7.27	1.09	1.46	1.44	1.44	1.50	1.46
9196.	7.34	1.27	1.47	1.45	1.45	1.53	1.47
9259.	7.36	1.27	1.47	1.46	1.46	1.54	1.48

PACK NO. 214  
GULTON 4 A.H.

DEPTH OF DISCHARGE 40  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK VOLTAGE	CURRENT 3.20	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
8402.	4.30	3.11	1.09	1.12	.00	1.09	1.04	
8431.	4.03	3.18	.97	1.11	.00	1.08	.92	
8474.	2.97	3.13	.82	1.09	.00	1.07	.03	
		2.00						
8402.	5.95	1.76	1.44	1.52	.00	1.58	1.44	END OF CHARGE
8431.	5.94	1.78	1.44	1.52	.00	1.58	1.44	
8474.	5.97	2.05	1.44	1.53	.00	1.59	1.44	



PACK NO. 228  
GULTON 4 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.20

CELL VOLTAGES  
1 2 3 4 5

8737.	5.95	1.18	1.20	1.21	1.20	1.19	1.20	END OF DISCHARGE
8766.	5.96	1.13	1.20	1.20	1.21	1.19	1.21	
8844.	5.94	1.19	1.19	1.20	1.20	1.18	1.20	
8873.	5.92	1.20	1.19	1.20	1.20	1.18	1.19	
8942.	5.91	1.21	1.19	1.19	1.19	1.17	1.20	
8973.	5.93	1.19	1.19	1.20	1.20	1.18	1.19	

9056.	5.96	1.18	1.20	1.20	1.20	1.18	1.20	
9089.	6.79	1.19	1.36	1.37	1.37	1.37	1.36	
9152.	5.96	1.21	1.20	1.21	1.21	1.19	1.19	

8737.	7.11	.96	1.43	1.43	1.43	1.43	1.43	END OF CHARGE
8766.	7.08	.76	1.43	1.42	1.43	1.42	1.43	
8844.	7.12	.64	1.44	1.43	1.43	1.43	1.43	
8873.	7.10	.73	1.43	1.42	1.43	1.43	1.43	
8942.	7.10	.67	1.43	1.42	1.43	1.43	1.44	
8973.	7.12	.70	1.44	1.42	1.43	1.43	1.42	

9056.	7.08	.69	1.43	1.41	1.42	1.42	1.42	
9089.	7.13	.84	1.44	1.42	1.43	1.43	1.43	
9152.	7.15	.81	1.44	1.43	1.44	1.44	1.43	

PACK NO. 240  
GULTON 4 A. H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 2.00

CELL VOLTAGES  
1 2 3 4 5

8771.	4.54	1.97	1.14	1.15	1.16	.00	1.13
8800.	4.51	1.91	1.15	1.13	1.14	.00	1.13
8878.	3.96	1.98	1.12	.60	1.13	.00	1.14
8907.	4.49	1.98	1.14	1.13	1.12	.00	1.12
8976.	4.41	1.99	1.14	1.04	1.14	.00	1.13
9007.	4.29	2.01	1.14	1.01	1.05	.00	1.12
9052.	4.26	2.00	1.14	.95	1.08	.00	1.11
9090.	4.41	2.03	1.14	1.10	1.07	.00	1.13
9123.	4.34	2.02	1.15	1.08	1.00	.00	1.12
9186.	4.41	2.01	1.14	1.05	1.13	.00	1.12

END OF  
DISCHARGE

8771.	5.82	1.64	1.47	1.45	1.46	.00	1.48
8800.	5.80	1.55	1.46	1.45	1.45	.00	1.47
8878.	5.78	1.60	1.46	1.41	1.46	.00	1.47
8907.	5.80	1.52	1.46	1.44	1.45	.00	1.46
8976.	5.77	1.41	1.46	1.43	1.46	.00	1.46
9007.	5.77	1.49	1.46	1.43	1.44	.00	1.45
9052.	5.77	1.42	1.46	1.43	1.45	.00	1.45
9090.	5.77	1.34	1.45	1.44	1.44	.00	1.46
9123.	5.77	1.35	1.46	1.44	1.44	.00	1.45
9186.	5.79	1.24	1.46	1.44	1.46	.00	1.45

END OF  
CHARGE

PACK NO. 216  
GULTON 12 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 3.60 1

CELL VOLTAGES  
2 3 4 5

END OF  
DISCHARGE

5780.	6.24	3.64	1.25	1.26	1.26	1.26	1.26	1.26
5809.	6.25	3.57	1.25	1.26	1.26	1.26	1.26	1.26
5887.	6.24	3.58	1.25	1.26	1.26	1.26	1.26	1.26
5916.	6.24	3.57	1.25	1.26	1.26	1.26	1.26	1.25
5985.	6.22	3.58	1.25	1.25	1.25	1.25	1.25	1.26
6016.	6.20	3.58	1.24	1.25	1.25	1.25	1.25	1.24
6061.	6.20	3.58	1.24	1.25	1.25	1.25	1.25	1.24
6099.	6.23	3.70	1.25	1.25	1.25	1.25	1.26	1.25
6132.	6.22	3.64	1.25	1.25	1.26	1.26	1.26	1.24
6195.	6.22	3.62	1.25	1.26	1.26	1.26	1.26	1.25

2.07

END OF  
CHARGE

5780.	7.48	1.07	1.56	1.50	1.48	1.49	1.51
5809.	7.50	.96	1.57	1.49	1.48	1.48	1.51
5887.	7.54	1.13	1.57	1.50	1.50	1.50	1.53
5916.	7.52	1.04	1.57	1.50	1.48	1.49	1.51
5985.	7.50	1.07	1.58	1.49	1.48	1.48	1.51
6016.	7.52	1.04	1.59	1.49	1.48	1.49	1.50
6061.	7.53	1.04	1.59	1.50	1.48	1.49	1.50
6099.	7.48	1.19	1.56	1.48	1.48	1.48	1.51
6132.	7.52	1.10	1.58	1.49	1.48	1.49	1.51
6195.	7.52	1.08	1.59	1.49	1.48	1.49	1.51

PACK NO. 301  
GULTON 12 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00 1

CELL VOLTAGES  
2 3 4 5

END OF  
DISCHARGE

6642.	4.78	5.96	1.21	1.21	1.20	.00	1.20
6672.	4.78	5.94	1.21	1.21	1.20	.00	1.20
6711.	4.77	5.98	1.20	1.21	1.20	.00	1.19
6779.	4.77	5.98	1.21	1.22	1.21	.00	1.21
6848.	4.76	5.96	1.20	1.20	1.20	.00	1.19
6880.	4.75	6.00	1.20	1.20	1.19	.00	1.19
6913.	4.77	6.03	1.20	1.19	1.10	.00	1.19
6962.	4.75	6.11	1.20	1.19	1.19	.00	1.19
7058.	4.80	5.95	1.21	1.20	1.20	.00	1.20

END OF  
CHARGE

6642.	6.17	1.76	1.54	1.53	1.52	.00	1.57
6672.	6.23	2.01	1.56	1.54	1.53	.00	1.60
6711.	6.17	1.87	1.54	1.53	1.52	.00	1.56
6779.	6.17	1.86	1.54	1.54	1.53	.00	1.58
6848.	6.18	1.80	1.54	1.54	1.52	.00	1.57
6880.	6.17	1.83	1.54	1.54	1.52	.00	1.57
6913.	6.39	2.50	1.59	1.60	1.56	.00	1.64
6962.	6.34	2.09	1.57	1.61	1.55	.00	1.60
7058.	6.24	1.70	1.56	1.58	1.53	.00	1.58

PACK NO. 227  
GULTON 12 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00

CELL VOLTAGE  
1 2 3 4 5

END OF  
DISCHARGE

END OF  
CHARGE

6036.	5.62	5.98	1.13	1.14	1.13	1.13	1.13	1.14
6066.	5.64	6.00	1.14	1.14	1.14	1.14	1.14	1.14
6143.	5.55	5.95	1.10	1.14	1.11	1.12	1.14	1.14
6173.	5.62	5.93	1.12	1.14	1.13	1.14	1.14	1.14
6242.	5.64	5.94	1.13	1.14	1.13	1.14	1.14	1.15
6274.	5.64	5.96	1.13	1.14	1.14	1.14	1.14	1.13
6307.	5.68	5.94	1.14	1.15	1.14	1.15	1.15	1.14
6356.	5.64	5.98	1.13	1.14	1.13	1.14	1.14	1.14
6389.	5.59	6.01	1.11	1.13	1.12	1.12	1.12	1.12
6452.	5.68	5.95	1.15	1.15	1.15	1.14	1.14	1.14
6036.	7.31	3.75	1.45	1.47	1.48	1.47	1.47	1.48
6066.	7.32	3.92	1.45	1.47	1.48	1.48	1.48	1.48
6143.	7.28	3.77	1.44	1.47	1.46	1.46	1.46	1.48
6173.	7.33	3.76	1.45	1.48	1.48	1.48	1.48	1.48
6242.	7.31	3.76	1.45	1.47	1.47	1.47	1.47	1.49
6274.	7.31	3.79	1.45	1.47	1.48	1.47	1.47	1.47
6307.	7.35	3.76	1.45	1.48	1.48	1.48	1.48	1.49
6356.	7.36	3.85	1.45	1.48	1.48	1.48	1.48	1.49
6389.	7.30	3.85	1.45	1.47	1.47	1.47	1.47	1.47
6452.	7.35	3.82	1.45	1.49	1.48	1.48	1.48	1.48

PACK NO. 78  
GULTON 12 A.H.

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 3.60

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

6597.	4.57	3.59	1.15	1.14	1.16	.00	1.16
6627.	4.58	3.61	1.15	1.14	1.16	.00	1.17
6704.	4.53	3.64	1.14	1.13	1.15	.00	1.16
6734.	4.60	3.61	1.15	1.14	1.16	.00	1.17
6803.	4.55	3.59	1.14	1.13	1.15	.00	1.16
6835.	4.56	3.58	1.14	1.14	1.16	.00	1.14
6868.	4.56	3.60	1.15	1.13	1.15	.00	1.15
6917.	4.54	3.63	1.14	1.13	1.15	.00	1.15
6950.	4.54	3.62	1.14	1.13	1.16	.00	1.14
7013.	6.09	3.59	1.22	1.27	1.24	.00	1.23

END OF  
CHARGE

6597.	5.76	2.95	2.88	1.44	1.44	1.46	.00	1.43
6627.	5.76	2.93	1.44	1.44	1.44	1.46	.00	1.44
6704.	5.77	2.82	1.44	1.45	1.45	1.45	.00	1.44
6734.	5.72	2.36	1.43	1.43	1.44	1.44	.00	1.42
6803.	5.75	2.27	1.43	1.44	1.44	1.45	.00	1.44
6835.	5.74	2.28	1.43	1.44	1.44	1.46	.00	1.42
6868.	5.74	2.30	1.44	1.44	1.44	1.45	.00	1.43
6917.	5.76	2.93	1.44	1.44	1.44	1.45	.00	1.43
6950.	5.77	2.91	1.44	1.44	1.44	1.46	.00	1.42
7013.	7.14	2.87	1.43	1.43	1.43	1.43	.00	1.43

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PACK NO. 213  
GULTON HSI 6 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 3.00

CELL VOLTAGES  
1 2 3 4 5

5745.	5.99	3.00	1.20	1.20	1.20	1.21	1.21	1.21	END OF DISCHARGE
5775.	5.99	2.99	1.20	1.20	1.20	1.21	1.21	1.21	
5814.	5.99	3.03	1.20	1.21	1.20	1.21	1.21	1.21	
5882.	5.99	3.03	1.20	1.21	1.21	1.21	1.21	1.21	
5951.	5.99	3.01	1.20	1.20	1.21	1.21	1.21	1.21	
5983.	5.98	3.02	1.20	1.20	1.21	1.21	1.21	1.20	
6016.	5.98	3.04	1.20	1.20	1.20	1.20	1.20	1.19	
6065.	5.03	2.97	1.21	1.21	1.21	1.21	1.21	1.21	
6099.	5.01	2.99	1.21	1.21	1.21	1.21	1.21	1.21	
6161.	5.06	3.00	1.21	1.22	1.22	1.22	1.22	1.21	

1.73

5745.	7.69	.86	1.52	1.53	1.52	1.58	1.57	END OF CHARGE
5775.	7.78	.98	1.54	1.55	1.54	1.60	1.61	
5814.	7.77	.96	1.54	1.56	1.53	1.60	1.59	
5882.	7.76	.98	1.53	1.55	1.53	1.60	1.58	
5951.	7.74	.93	1.53	1.54	1.53	1.60	1.58	
5983.	7.75	.94	1.54	1.55	1.54	1.60	1.58	
6016.	7.75	.92	1.53	1.54	1.53	1.59	1.57	
6065.	7.72	.94	1.53	1.54	1.53	1.58	1.57	
6099.	7.73	.90	1.53	1.54	1.53	1.59	1.57	
6161.	7.75	.88	1.53	1.54	1.54	1.60	1.57	

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PACK NO. 218  
GULTON HSI 6 A.H.

DEPTH OF DISCHARGE 40  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 4.80

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

5617.	4.43	4.70	1.12	.00	1.13	1.11	1.10
5647.	4.46	4.71	1.13	.00	1.13	1.12	1.11
5754.	4.40	4.62	1.13	.00	1.12	1.11	1.08
5763.	4.34	4.61	1.11	.00	1.11	1.08	1.07
5855.	4.34	4.63	1.11	.00	1.11	1.08	1.05
5918.	4.56	4.72	1.15	.00	1.12	1.17	1.15
5928.	4.41	4.67	1.12	.00	1.12	1.11	1.09
5966.	5.81	3.75	1.18	.00	1.18	1.18	1.13
6014.	4.49	4.67	1.14	.00	1.13	1.14	1.11

END OF  
CHARGE

5617.	6.04	1.33	1.51	.00	1.53	1.50	1.53
5647.	6.05	1.47	1.52	.00	1.54	1.51	1.54
5754.	6.09	1.32	1.52	.00	1.55	1.52	1.54
5763.	6.06	1.35	1.52	.00	1.53	1.51	1.54
5855.	6.07	1.36	1.53	.00	1.54	1.51	1.53
5918.	5.89	1.69	1.49	.00	1.50	1.46	1.47
5928.	6.05	1.36	1.52	.00	1.53	1.51	1.52
5966.	7.65	1.19	1.54	.00	1.56	1.53	1.52
6014.	6.08	1.32	1.52	.00	1.54	1.51	1.53

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PACK NO. 238  
GULTON HSI 6 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 3.00

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

5318.	3.39	2.92	1.15	.00	1.17	1.11	.00
5425.	3.37	2.99	1.15	.00	1.15	1.12	.00
5454.	3.37	2.97	1.15	.00	1.16	1.11	.00
5523.	3.74	2.55	1.27	.00	1.27	1.22	.00
5555.	3.70	2.58	1.25	.00	1.25	1.20	.00
5589.	3.70	2.57	1.26	.00	1.25	1.19	.00
5637.	3.29	2.99	1.14	.00	1.14	1.05	.00
5671.	2.86	2.67	1.12	.00	1.04	.74	.00
5733.	3.65	2.55	1.26	.00	1.27	1.12	.00

END OF  
CHARGE

5318.	4.36	2.06	1.46	.00	1.46	1.46	.00
5425.	4.36	1.99	1.46	.00	1.44	1.47	.00
5454.	4.37	1.98	1.45	.00	1.46	1.47	.00
5523.	4.36	2.23	1.46	.00	1.46	1.46	.00
5555.	4.35	2.24	1.46	.00	1.46	1.45	.00
5589.	4.33	2.14	1.46	.00	1.44	1.44	.00
5637.	4.36	1.71	1.46	.00	1.44	1.47	.00
5671.	4.32	1.28	1.44	.00	1.44	1.45	.00
5733.	4.30	1.13	1.44	.00	1.44	1.43	.00

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PACK NO. 243  
SONGSTONE 3 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK CURRENT VOLTAGE	CELL VOLTAGES					END OF DISCHARGE
		1	2	3	4	5	
3670.	6.04	.90	1.21	1.21	1.22	1.23	
3747.	6.05	.90	1.21	1.21	1.22	1.23	
3777.	6.05	.90	1.21	1.21	1.22	1.23	
3846.	6.03	.91	1.21	1.21	1.22	1.23	
3878.	6.04	.91	1.21	1.21	1.22	1.22	
3960.	6.06	.91	1.21	1.22	1.22	1.21	
4046.	6.08	.90	1.22	1.22	1.23	1.22	
3670.	7.73	.52	1.47	1.50	1.63	1.69	END OF CHARGE
3747.	7.73	.23	1.47	1.50	1.61	1.68	
3777.	7.76	.24	1.48	1.51	1.61	1.70	
3846.	7.72	.26	1.48	1.50	1.59	1.70	
3878.	7.73	.26	1.48	1.50	1.60	1.68	
3960.	7.72	.19	1.46	1.48	1.67	1.66	
4046.	7.69	.23	1.46	1.49	1.62	1.67	

PACK NO. 231  
SONOTONE 3 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.50

CELL VOLTAGES  
1 2 3 4 5

3640.	5.88	1.50	1.19	1.19	1.20	1.19	1.16	END OF DISCHARGE
3670.	5.85	1.48	1.18	1.18	1.19	1.18	1.16	
3747.	5.84	1.47	1.18	1.18	1.19	1.18	1.15	
3777.	5.82	1.48	1.18	1.17	1.18	1.18	1.14	
3846.	5.80	1.50	1.17	1.17	1.18	1.18	1.15	
3878.	5.83	1.50	1.18	1.17	1.18	1.18	1.14	

4046.	5.88	1.49	1.19	1.18	1.19	1.19	1.14
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3640.	7.66	.49	1.53	1.54	1.55	1.53	1.55	END OF CHARGE
3670.	7.65	.47	1.53	1.53	1.56	1.54	1.54	
3747.	7.68	.47	1.54	1.54	1.56	1.54	1.54	
3777.	7.68	.46	1.54	1.54	1.56	1.54	1.55	
3846.	7.66	.47	1.54	1.53	1.56	1.54	1.54	
3878.	7.66	.50	1.53	1.54	1.56	1.54	1.52	

4046.	7.63	.52	1.53	1.53	1.56	1.53	1.52
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PACK NO. 203  
SONOTONE 3 A.H.

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.50

CELL VOLTAGES  
1 2 3 4 5

DISCHARGE  
END OF

3798.	5.72	1.51	1.16	1.16	1.13	1.16	1.16	1.16
3828.	5.72	1.50	1.16	1.15	1.13	1.16	1.16	1.16
3905.	5.70	1.51	1.15	1.15	1.12	1.16	1.16	1.16
3935.	5.52	1.51	1.11	1.11	1.08	1.13	1.13	1.13
4004.	5.74	1.50	1.16	1.16	1.13	1.16	1.17	1.17
4036.	5.73	1.51	1.16	1.15	1.13	1.16	1.15	1.15
4069.	5.76	1.50	1.17	1.16	1.13	1.16	1.16	1.16
4118.	5.81	1.50	1.17	1.16	1.16	1.17	1.17	1.17
4151.	5.73	1.51	1.15	1.15	1.14	1.16	1.15	1.15
4214.	5.78	1.50	1.17	1.17	1.14	1.17	1.16	1.16

147

3798.	7.25	.94	1.45	1.46	1.47	1.47	1.46	1.46
3828.	7.22	.95	1.45	1.45	1.46	1.46	1.45	1.45
3905.	7.21	.95	1.44	1.45	1.45	1.46	1.45	1.45
3935.	7.26	.96	1.45	1.46	1.47	1.47	1.45	1.45
4004.	7.28	.95	1.46	1.46	1.47	1.47	1.47	1.47
4036.	7.25	.95	1.45	1.46	1.46	1.47	1.45	1.45
4069.	7.30	.94	1.46	1.47	1.46	1.48	1.46	1.46
4118.	7.24	.95	1.45	1.45	1.46	1.47	1.45	1.45
4151.	7.21	.95	1.44	1.45	1.46	1.46	1.43	1.43
4214.	7.27	.95	1.45	1.46	1.47	1.47	1.45	1.45

END OF  
CHARGE

PACK NO. 202  
SONOTONE 3 A.H.

DEPTH OF DISCHARGE 40  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 2.40

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

3479.	4.14	2.37	.99	1.12	.00	1.02	1.04
3508.	4.16	2.38	.99	1.12	.00	1.03	1.05
3586.	4.25	2.34	1.02	1.14	.00	1.06	1.07
3615.	4.22	2.33	1.01	1.13	.00	1.05	1.06
3684.	4.13	2.39	.98	1.12	.00	1.02	1.05
3716.	4.06	2.43	.97	1.11	.00	.99	1.01
3750.	4.19	2.36	1.01	1.12	.00	1.03	1.05
3798.	4.43	2.39	1.10	1.13	.00	1.11	1.11
3832.	4.39	2.39	1.08	1.12	.00	1.10	1.11
3894.	4.44	2.33	1.08	1.13	.00	1.13	1.12

END OF  
CHARGE

1/48

3479.	5.96	1.50	1.48	1.47	.00	1.57	1.48
3508.	5.96	1.06	1.48	1.47	.00	1.56	1.48
3586.	5.94	1.33	1.47	1.47	.00	1.55	1.48
3615.	5.96	1.31	1.48	1.47	.00	1.56	1.48
3684.	5.97	1.14	1.48	1.47	.00	1.57	1.49
3716.	5.97	1.13	1.48	1.47	.00	1.57	1.48
3750.	5.98	1.10	1.48	1.47	.00	1.57	1.49
3798.	6.00	1.12	1.47	1.46	.00	1.57	1.53
3832.	5.99	1.18	1.47	1.47	.00	1.57	1.51
3894.	6.01	1.09	1.47	1.47	.00	1.59	1.50

PACK NO. 226  
SONOTONE 3 A.H.

DEPTH OF DISCHARGE 15  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGE 0.90

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

3627.	5.77	.90	1.18	1.17	1.16	1.17	1.14
3685.	5.82	.90	1.19	1.17	1.17	1.17	1.16
3714.	5.83	.90	1.19	1.18	1.18	1.18	1.16
3783.	5.81	.90	1.18	1.17	1.17	1.18	1.16
3815.	5.80	.91	1.18	1.17	1.17	1.17	1.14
3849.	5.80	.90	1.18	1.18	1.16	1.18	1.14
3897.	5.84	.90	1.21	1.17	1.17	1.18	1.14
3931.	5.83	.90	1.19	1.17	1.17	1.18	1.14
3993.	5.86	.88	1.18	1.19	1.19	1.19	1.15

END OF  
CHARGE

3627.	7.08	.72	1.40	1.42	1.44	1.43	1.44
3685.	7.06	.73	1.40	1.42	1.43	1.42	1.44
3714.	7.09	.73	1.41	1.42	1.43	1.42	1.44
3783.	7.08	.72	1.40	1.42	1.43	1.43	1.44
3815.	7.08	.73	1.40	1.42	1.44	1.42	1.43
3849.	7.07	.72	1.40	1.42	1.43	1.42	1.43
3897.	7.08	.73	1.41	1.41	1.43	1.42	1.43
3931.	7.08	.73	1.40	1.42	1.44	1.42	1.43
3993.	7.11	.73	1.41	1.43	1.45	1.43	1.44

PACK NO. 237  
 SUNCTION 3 A.H.

DEPTH OF DISCHARGE 25  
 PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
 ORBIT PERIOD 90 MIN.

CYCLE BACK CURRENT  
 NO. VOLTAGE 1.50

CELL VOLTAGES  
 1 2 3 4 5

3596.	4.95	1.49	1.07	1.08	1.03	1.08	.74
3626.	5.02	1.49	1.10	1.09	1.02	1.10	.74
3637.	4.99	1.34	1.01	1.02	.77	1.02	.30
3665.	4.83	1.49	1.13	1.13	1.05	1.13	.63
3733.	4.16	1.51	1.13	1.12	.97	1.12	.88
3802.	4.11	1.50	1.11	1.11	.92	1.11	.61
3834.	4.04	1.51	1.12	1.16	1.16	1.16	1.04
3867.	5.01	1.53	1.15	1.18	1.15	1.16	1.01
3914.	5.00	1.51	1.17	1.17	1.16	1.17	1.02

END OF  
 DISCHARGE

4010.	5.01	1.51	1.14	1.16	1.17	1.16	1.02
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1.20

3596.	7.18	.55	1.42	1.43	1.43	1.43	1.50
3626.	7.22	.40	1.43	1.44	1.43	1.44	1.51
3637.	7.25	.71	1.44	1.45	1.44	1.45	1.54
3665.	7.27	.52	1.44	1.46	1.44	1.45	1.54
3733.	7.23	.56	1.43	1.45	1.43	1.44	1.52
3802.	7.32	.66	1.44	1.46	1.45	1.46	1.56
3834.	7.31	.75	1.44	1.45	1.45	1.45	1.54
3867.	7.29	.73	1.44	1.45	1.45	1.45	1.53
3914.	7.30	.82	1.44	1.45	1.45	1.46	1.54

END OF  
 CHARGE

4010.	7.27	.53	1.43	1.45	1.45	1.45	1.52
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PACK NO. 257  
YARDNEY 5 A.H.

DEPTH OF DISCHARGE 20  
PERCENT OF RECHARGE .3A  
TEST TEMPERATURE 0  
ORBIT PERIOD 24 HRS.

CYCLE PACK CURRENT  
NO. VOLTAGE 1.00

1 2 3 4 5  
CELL VOLTAGES

164. 4.21 1.00  
178. 3.78 .97  
190. 2.43 .87

.00 1.02 1.08 1.07 1.07  
.00 .59 1.08 1.07 1.06  
.00 .76 1.08 1.07 1.05

END OF  
DISCHARGE

.30  
164. 6.01 .00  
178. 5.99 .01  
190. 6.01 .00

.00 1.44 1.51 1.65 1.46  
.00 1.44 1.48 1.66 1.44  
.00 1.45 1.49 1.68 1.42

END OF  
CHARGE



PACK NO. 69  
YARDNEY 5 A.H.

DEPTH OF DISCHARGE 20  
PERCENT OF RECHARGE .3A  
TEST TEMPERATURE 25 C  
ORBIT PERIOD 24 HRS.

CYCLE NO.	PACK CURRENT VOLTAGE	CELL VOLTAGES				
		1	2	3	4	5
121.	5.35	1.00	1.08	1.08	1.08	1.07
135.	5.34	.99	1.07	1.08	1.08	1.05
147.	5.36	.99	1.07	1.08	1.09	1.06
.30						
121.	7.49	.03	1.48	1.51	1.49	1.57
135.	7.57	.00	1.44	1.76	1.49	1.48
147.	7.57	.00	1.44	1.79	1.45	1.47

END OF  
DISCHARGE

END OF  
CHARGE

PACK NO. 233  
YARDNEY 5 A.H.

DEPTH OF DISCHARGE 20  
PERCENT OF RECHARGE .3A

TEST TEMPERATURE 25 C  
ORBIT PERIOD 24 HRS.

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES					END OF DISCHARGE
			1	2	3	4	5	
121.	5.36	.99	1.08	1.08	1.08	1.08	1.08	
135.	5.36	1.01	1.08	1.08	1.08	1.08	1.07	
147.	5.60	1.00	1.11	1.09	1.14	1.16	1.13	
		.30						
121.	7.44	.06	1.49	1.50	1.50	1.50	1.50	
135.	7.42	.02	1.49	1.49	1.50	1.49	1.48	
147.	7.60	.00	1.53	1.53	1.53	1.53	1.52	
								END OF CHARGE

PACK NO. 232  
GULTON 5.6 A.H. RS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE -20 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 2.80

CELL VOLTAGES

	1	2	3	4	5
883.	1.14	1.15	1.15	1.14	1.14
919.	1.14	1.15	1.15	1.14	1.15
998.	1.13	1.14	1.14	1.13	1.14
1027.	1.14	1.16	1.16	1.15	1.15
1096.	1.12	1.13	1.14	1.13	1.12
1128.	1.13	1.14	1.14	1.14	1.12
1169.	1.16	1.16	1.16	1.16	1.16
1210.	1.09	1.10	1.10	1.10	1.01
1249.	1.16	1.16	1.16	1.16	1.15
1304.	1.16	1.16	1.16	1.16	1.14

END OF  
DISCHARGE

883.	7.55	1.61
919.	7.54	.88
998.	7.57	.84
1027.	7.59	.87
1096.	7.54	.86
1128.	7.56	.90
1169.	6.55	.90
1210.	7.54	1.62
1249.	7.54	1.01
1304.	7.54	.90
	.86	

END OF  
CHARGE

154

PACK NO. 244  
GULTON 5.6 A.H. FRS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115  
TEST TEMPERATURE -20 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 2.80

NO.	VOLTAGES	1	2	CELL VOLTAGES		
				3	4	5
883.	5.75	2.76	1.16	1.16	1.16	1.16
919.	5.75	2.75	1.15	1.16	1.16	1.16
998.	5.73	2.77	1.15	1.16	1.15	1.16
1027.	5.76	2.74	1.16	1.16	1.16	1.16
1096.	5.72	2.76	1.15	1.15	1.15	1.16
1128.	5.73	2.76	1.15	1.16	1.15	1.14
1169.	5.73	2.76	1.15	1.15	1.15	1.15
1210.	5.57	2.77	1.12	1.12	1.11	1.12
1249.	5.80	2.76	1.17	1.17	1.17	1.16
1304.	5.80	2.76	1.17	1.17	1.17	1.16

END OF  
DISCHARGE

155

883.	7.72	1.55	1.55	1.56	1.55	1.56
919.	7.69	1.55	1.54	1.56	1.54	1.55
998.	7.71	1.55	1.55	1.55	1.54	1.56
1027.	7.72	1.55	1.55	1.56	1.55	1.55
1096.	7.68	1.54	1.54	1.55	1.54	1.55
1128.	7.68	1.54	1.54	1.55	1.54	1.54
1169.	7.67	1.54	1.54	1.55	1.54	1.53
1210.	7.66	1.53	1.55	1.55	1.53	1.53
1249.	7.68	1.54	1.54	1.55	1.54	1.54
1304.	7.68	1.54	1.54	1.55	1.54	1.54

END OF  
CHARGE

PACK NO. 200  
GULTON 5.6 A.H. FRS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 2.80

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

1170.	5.84	2.77	1.18	1.17	1.16	1.16	1.16	1.16
1200.	5.81	2.80	1.17	1.17	1.17	1.16	1.16	1.17
1277.	5.84	2.71	1.18	1.17	1.17	1.17	1.17	1.18
1307.	5.83	2.72	1.18	1.18	1.17	1.17	1.17	1.17
1376.	6.78	.00	1.36	1.36	1.36	1.36	1.36	1.37
1408.	5.80	2.78	1.17	1.16	1.15	1.15	1.15	1.16
1527.	6.00	2.78	1.20	1.20	1.19	1.19	1.19	1.20
1576.	5.94	2.75	1.20	1.19	1.18	1.18	1.18	1.19

END OF  
CHARGE

1170.	7.72	1.14	1.54	1.54	1.53	1.55	1.53
1200.	7.72	1.23	1.54	1.55	1.55	1.55	1.55
1277.	7.72	1.14	1.54	1.55	1.54	1.55	1.54
1307.	7.71	1.12	1.54	1.55	1.54	1.55	1.55
1376.	7.69	1.28	1.54	1.54	1.54	1.55	1.55
1408.	7.71	1.17	1.55	1.55	1.53	1.55	1.54
1527.	7.68	1.14	1.54	1.54	1.52	1.53	1.53
1576.	7.69	1.07	1.54	1.55	1.52	1.54	1.54

156

PACK NO. 390  
GULTON 5.6 A.H. RS

TEST TEMPERATURE 0 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 2.80

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 115

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

1187.	5.83	2.80	1.18	1.16	1.16	1.17	1.16	1.16
1294.	5.81	2.80	1.17	1.16	1.16	1.16	1.16	1.16
1323.	5.82	2.78	1.18	1.16	1.16	1.16	1.16	1.16
1392.	5.79	2.81	1.17	1.16	1.15	1.16	1.16	1.15
1424.	5.79	2.80	1.17	1.15	1.15	1.16	1.16	1.15
1458.	5.80	2.80	1.17	1.16	1.15	1.16	1.16	1.16
1506.	5.85	2.84	1.18	1.16	1.16	1.17	1.16	1.16
1540.	5.83	2.84	1.18	1.16	1.16	1.17	1.16	1.16
1602.	5.86	2.83	1.19	1.17	1.17	1.17	1.17	1.17

END OF  
CHARGE

1187.	7.79	1.61	1.56	1.55	1.55	1.54	1.56	1.56
1294.	7.75	.99	1.55	1.54	1.54	1.53	1.55	1.55
1323.	7.76	.88	1.55	1.55	1.54	1.53	1.56	1.56
1392.	7.74	.90	1.55	1.54	1.54	1.53	1.55	1.55
1424.	7.73	.89	1.55	1.54	1.54	1.53	1.56	1.56
1458.	7.75	.88	1.55	1.54	1.54	1.53	1.56	1.56
1506.	7.78	.85	1.55	1.55	1.54	1.53	1.57	1.57
1540.	7.72	.80	1.55	1.54	1.53	1.53	1.55	1.55
1602.	7.76	.80	1.54	1.53	1.53	1.52	1.54	1.54

PACK NO. 276  
GULTON 5.6 A.H. FRS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 2.80

CELL VOLTAGES

1

2

3

4

5

END OF  
DISCHARGE

1300.	5.38	2.75	1.06	1.06	1.10	1.09	1.10
1407.	5.11	2.85	1.01	1.01	1.05	1.04	1.04
1436.	5.26	2.78	1.04	1.05	1.08	1.07	1.06
1487.	5.45	2.79	1.07	1.07	1.09	1.09	1.10
1505.	5.46	2.76	1.09	1.08	1.10	1.12	1.12
1537.	5.23	2.76	1.03	1.02	1.06	1.07	1.08
1571.	5.41	2.76	1.07	1.06	1.07	1.11	1.13

1653.	5.39	2.79	1.07	1.06	1.12	1.09	1.08
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END OF  
CHARGE

1300.	7.31	1.76	1.46	1.48	1.48	1.46	1.47
1407.	7.28	1.80	1.46	1.48	1.46	1.46	1.47
1436.	7.29	1.79	1.46	1.48	1.47	1.46	1.47
1487.	7.33	1.78	1.45	1.47	1.46	1.45	1.47
1505.	7.30	1.77	1.46	1.47	1.47	1.46	1.47
1537.	7.29	1.78	1.46	1.47	1.47	1.46	1.45
1571.	7.31	1.77	1.46	1.48	1.47	1.47	1.46
1653.	7.29	1.78	1.46	1.48	1.47	1.46	1.45

PACK NO. 396  
GULTON 5.6 A.H. RS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 125

TEST TEMPERATURE 25 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
NO. VOLTAGES 2.80

CELL VOLTAGES  
1 2 3 4 5

END OF  
DISCHARGE

1297.	5.54	2.62	1.10	1.14	1.12	1.11	1.10
1332.	5.41	2.61	1.06	1.12	1.10	1.09	1.08
1371.	5.50	2.73	1.08	1.14	1.12	1.11	1.10
1439.	5.33	2.67	1.04	1.10	1.09	1.06	1.05
1508.	5.52	2.58	1.08	1.14	1.13	1.11	1.10
1540.	5.57	2.60	1.12	1.14	1.12	1.12	1.10
1573.	5.51	2.62	1.12	1.12	1.11	1.10	1.08
1622.	5.45	2.72	1.13	1.10	1.10	1.07	1.06
1656.	5.41	2.63	1.12	1.09	1.09	1.07	1.05
1718.	5.49	2.67	1.12	1.12	1.11	1.09	1.06

END OF  
CHARGE

1297.	7.19	1.21	1.45	1.43	1.45	1.44	1.45
1332.	7.24	1.41	1.46	1.44	1.45	1.45	1.46
1371.	7.18	1.27	1.45	1.44	1.44	1.44	1.45
1439.	7.20	1.28	1.45	1.43	1.43	1.44	1.44
1508.	7.19	1.17	1.45	1.43	1.44	1.45	1.45
1540.	7.19	1.22	1.46	1.43	1.45	1.45	1.44
1573.	7.19	1.26	1.46	1.43	1.44	1.44	1.44
1622.	7.20	1.29	1.46	1.43	1.44	1.44	1.45
1656.	7.18	1.16	1.46	1.43	1.44	1.44	1.44
1718.	7.18	1.17	1.46	1.43	1.44	1.45	1.44



PACK NO. 230  
 GULTON 5.6 A.H. RS

DEPTH OF DISCHARGE 25  
 PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
 ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT  
 NO. VOLTAGES 2.80 1 2 3 4 5

1275 3.17 2.76 1.04 1.10 .00 1.14 .00

END OF  
 DISCHARGE

1.30  
 1275 4.34 1.30 1.46 1.44 .00 1.43 .00

END OF  
 CHARGE

PACK NO. 242  
GULTON 5.6 A.H. FRS

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 160

TEST TEMPERATURE 40 C  
ORBIT PERIOD 90 MIN.

CYCLE PACK CURRENT

NO. VOLTAGES 2.80

CELL VOLTAGES

	1	2	3	4	5
1407.	1.03	1.00	1.06	1.00	1.04
1437.	1.04	1.03	1.05	1.02	1.05
1514.	1.04	1.04	1.05	1.03	1.07
1544.	1.01	1.01	1.05	1.01	1.05
1631.	1.03	1.01	1.02	1.00	1.04
1645.	1.05	1.02	1.03	1.01	1.03
1679.	1.05	1.00	1.04	.99	1.03
1712.	1.07	1.02	1.06	1.01	1.04
1775.	1.06	1.00	1.09	1.02	1.05

END OF  
DISCHARGE

1407.	7.24
1437.	7.24
1514.	7.25
1544.	7.21
1631.	7.22
1645.	7.23
1679.	7.21
1712.	7.21
1775.	7.21

END OF  
CHARGE

PACK NO. 239  
 GUE COUL 3.6 A.H.  
 DEPTH OF DISCHARGE 40  
 PERCENT OF RECHARGE  
 TEST TEMPERATURE 25 C  
 ORBIT PERIOD 90 MIN.

CYCLE NO.	PACK CURRENT VOLTAGE	CELL VOLTAGES					END OF
		1	2	3	4	5	
1714.	9.64 2.82	.92	.90	.93	1.07	.94	1.07 .98 .95 .94 .95
1744.	10.70 2.85	1.08	1.03	1.09	1.09	1.08	1.09 1.05 1.04 1.06 1.08
1821.	10.35 2.90	1.03	1.00	1.01	1.08	1.02	1.08 1.03 1.03 1.01 1.02
1851.	10.22 2.85	1.03	.96	1.00	1.07	.99	1.07 1.06 1.01 .99 1.04
1873.	11.01 2.87	1.11	1.16	1.11	1.06	1.13	1.06 1.07 1.12 1.11 1.03
3.60							
1714.	14.29 .27	1.42	1.43	1.43	1.47	1.43	1.45 1.42 1.41 1.41 1.41
1744.	14.30 .24	1.42	1.42	1.43	1.47	1.43	1.45 1.42 1.41 1.41 1.41
1821.	14.26 .41	1.41	1.43	1.41	1.46	1.43	1.44 1.41 1.40 1.41 1.40
1851.	14.92 2.10	1.48	1.49	1.48	1.55	1.46	1.53 1.50 1.47 1.47 1.47
1873.	14.22 .47	1.41	1.43	1.42	1.44	1.40	1.44 1.41 1.40 1.40 1.40
END OF CHARGE							

COULOMETER SONOTONE 5 A.H. DEPTH OF DISCHARGE 30 ORBIT PERIOD 90 MINUTES TEST TEMPERATURE 25° C

CYCLE NO.	PACK VOLTAGE	CURRENT	CIM	CELL VOLTAGES				
				1	2	3	4	5
7540	5.41	3.00	-0.161	1.11	1.09	1.12	1.11	1.09
7580	5.34		-0.172	1.12	1.09	1.12	1.12	1.10
7620	5.37		-0.162	1.12	1.09	1.13	1.13	1.10
7660	5.32		-0.149	1.10	1.09	1.12	1.12	1.09
7700	5.25		-0.197	1.06	1.06	1.10	1.10	1.06
7740	5.43		-0.153	1.12	1.10	1.14	1.13	1.11
7780	5.37		-0.179	1.11	1.09	1.12	1.12	1.09
7820	5.37		-0.161	1.12	1.09	1.13	1.13	1.10
7860	5.42		-0.165	1.13	1.10	1.13	1.13	1.11
7900	5.37		-0.150	1.11	1.09	1.13	1.13	1.09
7960	5.49		-0.135	1.12	1.10	1.13	1.13	1.11
8000	5.44		-0.131	1.12	1.10	1.13	1.13	1.10
8020	5.38		-0.174	1.11	1.09	1.12	1.12	1.09

END OF DISCHARGE

TIME TO  
START OF  
TRICKLE  
CHARGE

7540	8.00	0.30	+0.816	1.43	1.43	1.42	1.42	1.43	28.39
7580			+0.887	1.43	1.43	1.42	1.42	1.42	28.48
7620			+0.884	1.43	1.43	1.42	1.42	1.43	28.47
7660			+0.895	1.42	1.42	1.42	1.42	1.42	29.00
7700			+0.879	1.42	1.42	1.42	1.41	1.42	28.45
7740			+0.884	1.42	1.43	1.42	1.42	1.42	29.50
7780			+0.892	1.42	1.43	1.42	1.42	1.43	28.47
7820			+0.875	1.42	1.42	1.42	1.42	1.44	28.35
7860			+0.870	1.43	1.43	1.42	1.42	1.43	28.46
7900			+0.889	1.42	1.43	1.42	1.42	1.42	28.43
7940			+0.890	1.42	1.43	1.42	1.42	1.42	28.42
8000			+0.885	1.42	1.43	1.42	1.42	1.42	28.51
8020			+0.876	1.43	1.43	1.42	1.42	1.42	28.43

END OF CHARGE

SHERFEEY  
GULTON 3.6 A.H.

DEPTH OF DISCHARGE 40  
PERCENT OF RECHARGE 60

TEST TEMPERATURE 25° C  
ORBIT PERIOD 90 MINUTES

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES									
			1	2	3	4	5	6	7	8	9	10
2821	9.74	2.88	1.13		0.85	1.17	1.17	1.17	1.16	1.07	1.16	0.89
2860	10.54		1.17		1.03	1.23	1.22	1.22	1.22	1.19	1.22	1.04
2901	10.38		1.16		0.99	1.21	1.20	1.20	1.20	1.14	1.20	0.98
2941	9.79		1.13		0.87	1.17	1.17	1.17	1.17	1.07	1.16	0.88
2980	10.44		1.18		0.97	1.23	1.22	1.22	1.22	1.18	1.22	1.01
3020	10.22		1.16		0.94	1.21	1.20	1.20	1.20	1.13	1.20	0.95
3061	9.58		1.12		0.81	1.15	1.16	1.16	1.15	1.06	1.15	0.86
3100	10.34		1.17		0.91	1.22	1.21	1.21	1.21	1.18	1.21	0.98
3140	10.14		1.15		0.91	1.20	1.20	1.20	1.20	1.13	1.19	0.95
3181	9.66		1.12		0.76	1.16	1.16	1.16	1.16	1.07	1.15	0.86
3220	9.38		1.17			1.22	1.22	1.21	1.22	1.18	1.21	0.97
3260	9.18		1.15			1.20	1.20	1.19	1.20	1.13	1.20	0.94
3301	8.82		1.12			1.17	1.17	1.16	1.16	1.06	1.15	0.85

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CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES									
			1	2	3	4	5	6	7	8	9	10
2821	13.35	2.16	1.49		1.54	1.44	1.45	1.45	1.45	1.49	1.46	1.58
2860	14.25		1.63		1.57	1.55	1.55	1.56	1.55	1.58	1.61	1.62
2901	13.57		1.51		1.57	1.46	1.47	1.47	1.47	1.51	1.48	1.62
2941	13.40		1.49		1.55	1.45	1.45	1.45	1.45	1.49	1.45	1.60
2980	13.95		1.60		1.57	1.50	1.53	1.50	1.51	1.54	1.57	1.62
3020	13.52		1.50		1.59	1.46	1.46	1.46	1.46	1.46	1.47	1.62
3061	13.38		1.49		1.56	1.45	1.45	1.45	1.45	1.49	1.46	1.59
3100	14.40		1.65		1.56	1.58	1.60	1.57	1.59	1.59	1.64	1.61
3140	13.50		1.50		1.58	1.46	1.46	1.46	1.46	1.49	1.46	1.61
3181	13.37		1.49		1.56	1.45	1.45	1.45	1.45	1.49	1.45	1.59
3220	12.62		1.62			1.55	1.57	1.54	1.55	1.56	1.62	1.60
3260	11.94		1.49			1.46	1.46	1.46	1.46	1.49	1.46	1.61
3301	11.88		1.49			1.45	1.45	1.46	1.45	1.50	1.46	1.60

END OF  
CHARGE

END OF  
DISCHARGE

PACK NO. 185  
YARDNEY 12 AH AGZN

DEPTH OF DISCHARGE 25  
PERCENT OF RECHARGE 130

TEST TEMPERATURE -20  
ORBIT PERIOD 1.5 HRS.

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00

CELL VOLTAGES

214. 6.50 4.25 1.30 1.31 1.31 1.31 1.31 1.30

END OF  
DISCHARGE

.8p

214. 8.08 .82 1.62 1.62 1.64 1.62 1.62 1.62

END OF  
CHARGE

PACK NO. 197      DEPTH OF DISCHARGE 25      TEST TEMPERATURE 0  
 YARDNEY 12 AH AGZN      PERCENT OF RECHARGE 130      ORBIT PERIOD 1.5 HRS.

CYCLE PACK CURRENT      CELL VOLTAGES  
 NO.      VOLTAGE 6.00      1      2      3      4      5

106.    6.65    4.10    1.33    1.34    1.34    1.34    1.34    1.33

END OF  
DISCHARGE

106.    7.94    1.15    1.61    1.58    1.59    1.60    1.59

END OF  
CHARGE

PACK NO. 182  
YARDNEY 12 AH AGZN

TEST TEMPERATURE 25  
ORBIT PERIOD 1.5 HRS.

CYCLE PACK CURRENT  
NO. VOLTAGE 6.00

CELL VOLTAGES

END OF  
DISCHARGE

	1	2	3	4	5
692.	5.33	5.88	1.07	1.07	1.07
761.	5.34	5.92	1.07	1.07	1.07
829.	5.35	5.95	1.07	1.07	1.07
898.	5.30	5.99	1.06	1.06	1.06
930.	5.31	6.06	1.06	1.06	1.06
963.	5.32	6.08	1.06	1.06	1.06
1012.	5.34	6.10	1.07	1.07	1.07
1046.	5.35	5.98	1.07	1.07	1.07
1108.	5.36	5.94	1.08	1.07	1.07

END OF  
CHARGE

692.	7.70	1.49	1.55	1.53	1.53	1.54
761.	7.70	1.63	1.54	1.53	1.53	1.53
829.	7.66	1.64	1.54	1.54	1.54	1.54
898.	7.64	1.72	1.53	1.52	1.53	1.52
930.	7.64	1.76	1.53	1.52	1.53	1.53
963.	7.65	1.73	1.53	1.52	1.52	1.52
1012.	7.80	1.42	1.57	1.55	1.55	1.56
1046.	7.79	1.37	1.57	1.55	1.55	1.56
1108.	7.79	1.40	1.57	1.55	1.55	1.56



PACK NO. 609  
 DELCO 25 A.H. AG ZN  
 DEPTH OF DISCHARGE 40  
 PERCENT OF RECHARGE  
 TEST TEMPERATURE 25 C  
 ORBIT PERIOD 24 HRS.

CYCLE PACK CURRENT			CELL VOLTAGES										
NO.	VOLTAGES	10.00	1	2	3	4	5	6	7	8	9	10	
79.	14.39	10.03	1.45	1.44	1.44	1.44	1.44	1.43	1.43	1.43	1.42	1.43	END OF
104.	14.40	10.06	1.44	1.44	1.45	1.44	1.44	1.43	1.44	1.43	1.43	1.43	DISCHARGE
		1.00											
79.	18.78	.00	1.88	1.88	1.88	1.88	1.88	1.87	1.87	1.86	1.87	1.86	END OF
104.	18.77	.02	1.84	1.89	1.89	1.89	1.88	1.88	1.88	1.87	1.84	1.84	CHARGE